3.12 Social and Economic Parameters

3.12.1 Existing Economic Conditions

A review of existing economic conditions of the fisheries is provided in the Regulatory Impact Review (Appendix C of this document).

3.12.2 Existing Social Conditions

The socioeconomic analysis provided in this section is driven by requirements of the National Environmental Policy Act, the Magnuson-Stevens Act, and Executive Order 12898. Under NEPA, 'economic' and 'social' effects are specific environmental consequences to be examined (40 CFR § 1508.8). This section contains an overview of the standard socioeconomic variables typically found in an EIS, including a summary of population, income and employment data for each region.

This section is also guided, in part, by National Standard 8 under the Magnuson-Stevens Act (MSA). National Standard 8 is part of a set of standards that apply to all FMP's and regulations promulgated to implement such plans. Specifically, National Standard 8 states that:

> Conservation and management measures shall, consistent with the conservation requirements of this [Magnuson-Stevens] Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities and (B) to the extent practicable, minimize adverse economic impacts on such communities (Sec. 301(a)(8)).

The MSA defines a 'fishing community' as "...a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and United States fish processors that are based in such community" (Sec. 3 [16]). NMFS further specifies in the National Standard guidelines that a fishing community is "...a social or economic group whose members reside in a specific location and share a common dependency on commercial, recreational, or subsistence fishing or on directly related fisheries dependent services and industries (for example, boatyards, ice suppliers, tackle shops)" (63 FR 24235, May 1, 1998). 'Sustained participation' is defined by NMFS as "...continued access to the fishery within the constraints of the condition of the resource" (63 FR 24235, May 1, 1998). Consistent with National Standard 8, this section first identifies affected regions and communities and then describes and assesses the nature and magnitude of their dependence on and engagement in the groundfish fisheries of the North Pacific.

Beyond NEPA and MSA requirements, this section takes into account Executive Order 12898 (59 FR 7629 [1994]), which requires federal agencies to address environmental justice concerns by identifying "disproportionately high and adverse human health and environmental effects...on minority populations and low-income populations." Consistent with these requirements, the socioeconomic analysis presented here includes demographic data on minority and low-income populations specific to the relevant groundfish communities, presented in its own section for ease of review.

3.12.2.1 Regions and Communities Involved in the North Pacific Groundfish Fishery

In support of the community impact analysis of the various management alternatives under consideration, this section provides a description of the existing regional and community context of the North Pacific groundfish fishery. First, an overview is provided of the fishery as a whole. Next, socioeconomic profiles of six geographic areas with ties to the North Pacific groundfish fishery are provided: four in Alaska, one in Washington, and one in Oregon. The regions were defined based on logical socioeconomic and geographic units. Internal consistency with respect to type of engagement or dependence upon the groundfish fishery was more important in defining the regions than attempting to make them comparable for non-groundfish-related criteria. The regional definitions are consistent with the recently released programmatic Groundfish Draft EIS (NMFS 2001a). The regions and their constituent jurisdictions or geographies are listed in Table 3.12.-1. and shown on Figures 3.12-1 and 3.12-2. Figure 3.12-3 shows the adjacent FMP areas and subareas.

Table 3.12-1 Study regions and their acronyms

AKAPAI	**Alaska Peninsula and Aleutian Islands Region**. Includes the Aleutians East Borough and the Aleutians West Census Area.
AKKO	**Kodiak Region**. Includes the Kodiak Island Borough and other parts of the Kodiak archipelago.
AKSC	**Southcentral Alaska Region**. Includes Valdez-Cordova Census Area, Kenai Peninsula Borough, Matanuska-Susitna Borough, and Municipality of Anchorage.
AKSE	**Southeast Alaska Region**. Includes Yakutat Borough, Skagway-Hoonah-Angoon Borough, Haines Borough, City and Borough of Juneau, City and Borough of Sitka, Wrangell-Petersburg Census Area, Prince of Wales-Outer Ketchikan Census Area, and Ketchikan Gateway Borough.
WAIW	**Washington Inland Waters Region**. All counties bordering Puget Sound and the Strait of Juan de Fuca, including Clallum, Island, Jefferson, King, Kitsap, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston, and Whatcom.
ORCO	**Oregon Coast Region**. Counties bordering the northern Oregon coast including Lincoln, Tillamook, and Clatsop.

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The regional descriptions complement the sector descriptions presented in the Sector and Regional Profiles of the North Pacific Groundfish Fisheries (NPFMC: in press) to provide a rounded perspective on the socioeconomic aspects of the fishery. Quantitative data used in these regional descriptions are derived from the same data sources used in the sector profiles. Specific data sources, and their limitations, are described in those sections. The sector profiles provide descriptions of the groups engaged in the fishery and their activities, while these regional profiles describe how these groups fit into a regional socioeconomic context. The profiles focus primarily on the regional rather than the community level of analysis. The geographic reach of the areas of Alaska, Washington, and Oregon potentially related to the North Pacific groundfish fishery – and likely to experience socioeconomic impacts due to the proposed management alternatives – is enormous. At the same time, these areas encompass many communities with few or no direct ties to the fishery itself. Detailed community level descriptions of existing socioeconomic conditions for the communities most engaged in the groundfish fishery and, therefore, most likely to experience impacts based on the proposed management measures are contained in Appendix F(1) of this report.

3.12.2.2 Overview of the North Pacific Groundfish Fishery Socioeconomic Context

This subsection presents comparative information on population, employment and income, processing, processing ownership, and catcher vessel ownership and activity across the regions. In subsequent sections, each region is broken out separately, with a broad regional overview following a common format. The intent is to provide the reader with enough information to place the region in terms of its level of participation in the fishery in comparison with other regions, as well as to understand the relative level of importance of pollock and Pacific cod vis-a-vis other groundfish fisheries within each region. Following the general overview, the regionally important groundfish communities are discussed to the extent appropriate for that region, based on the likely distribution of impacts of the range of management alternatives.

Fisheries data have been provided in full time series format (1992-2000) where appropriate. 1992 represents the earliest year for which comparable data are available across processing and harvesting sectors, and 2000 represents the most recent full year for which data are available. Where single year "snapshot" data are more appropriate to the discussion than time series information, data for 1999 and 2000 are provided. 1999 data are presented as this represents the last full year prior to the implementation of the more sweeping Steller sea lion-related protection management measures, and for this reason, 1999 socioeconomic conditions are highlighted in the text discussions. 2000 data are also presented because they represent the most recent information available. Interpretation of 2000 data in terms of analyzing the impacts of Steller sea lion protection measures is problematic for several reasons, not the least of which is that management conditions changed dramatically during the year itself, so that the year as a whole represents neither pre- nor post-Steller sea lion RPA conditions.

It should be noted that the 1999-2000 period was a time of structural change for a good part of the groundfish fishery independent of Steller sea lion related issues. The most obvious of these changes were those associated with the American Fisheries Act (AFA) which, among other things, reduced the offshore catcher-processor fleet, shifted quota from offshore to inshore, and facilitated the formation of co-ops for offshore catcher processors in 1999 and for inshore and mothership catcher vessels in 2000. A comprehensive discussion of the social impacts of the AFA is beyond the scope of this document, but is provided in the North Pacific Fishery Management Council's report to Congress (in public review Draft at the time of this writing). It is sufficient to note that 1999 as a base year for this analysis does not represent a socioeconomic context in static equilibrium and it is not realistic to assume that all other things are being held equal.

As a methodological note, it should be stated that while the time series data in this document are similar to those found in the recent Groundfish Draft SEIS, they are not identical. The reason for this variation is discussed in detail in the sector profile section of this document, but in general results from both a different methodological approach and a refinement of data resulting from an improved ability to focus on directed catch (and exclude bycatch). It is the target fisheries that will be subject to the more direct impacts of proposed management alternatives. While consistency between documents might be valuable in an abstract sense, it is not particularly important in a practical (pragmatic) sense for the present task. For the purposes of the regional and community impact discussions, the precision of individual numbers is much less important than the accuracy of direction and magnitude of trends in existing conditions, and the direction and magnitude of change resulting from the proposed alternatives.

Population. The communities and regions that are engaged in the Bering Sea pollock fishery specifically, and the North Pacific groundfish fishery in general, are diverse in many ways. Perhaps the most obvious of these can be seen in the variation in regional populations. In Alaska, AKAPAI had a 1999 population of approximately 6,000, AKKO had approximately 14,000, and AKSC and AKSE had about 375,000 and 73,000, respectively. In the Pacific Northwest, the WAIW region had about 3.9 million residents and the Oregon Coast region has about 105,000. Specific population figures are presented in Appendix F(2). Beyond overall population, the types of communities and the population structures in the regions vary considerably. The fishery has an impact on the male/female population balance for some Alaska communities, primarily those where intensive groundfish processing facilities are located. In Alaska, particularly AKAPAI and AKKO, there is also a relationship between percent of population that is Alaska Native and commercial fisheries development. Communities that previously were predominantly Native and have developed as large commercial fishing centers have become less Native in composition over time compared to other non-fishing communities in the region. There are, of course, many variables involved, but for a few of the communities noted the relationship is straightforward. These differences in the male/female and Native/non-Native population segments tend to vary by the degree to which the directly fishery-related population is integrated with the rest of the population of the community. As a general rule, where development has been of an "industrial enclave" nature (which is also consistent with where the development has been the largest relative to the long-term resident population), the population structural shifts have been the greatest. Again, this articulation varies considerably from place to place, and is not as apparent in AKSC and AKSE as it is in the more western regions.

Employment and Income. Employment and income (payments to labor) information presented for each region provides a look at types and levels of economic engagement with the groundfish fishery. Specific employment and income figures for each region are provided in Appendix F(2). Information on employment in the processing sector provides insight on the level of employment in the communities that is directly attributable to groundfish fishery activity. Our assumptions in regard to community employment in groundfish processing are relatively crude, due to the limits of the information available. Employees of shoreplants are counted as part of the labor force for the community in which the shoreplant itself is located, while those of the more mobile processors are counted as part of the labor force of the community of residence of the owner of the processing entity. With these assumptions, during 1999 primary or direct Alaska groundfish processing employment ranged from none in ORCO to more than 2,600 persons in AKAPAI and more than 3,700 persons in WAIW. Interpretation of these data in terms of engagement with the community is less straightforward for some regions than for others. For some, processing plants tend to be industrial enclaves that are somewhat separate from the rest of the community, while for others there is no apparent differentiation between the processing workforce and the rest of the regional or local labor pool. For the WAIW region, Alaskan groundfish processing work is at sea, so in some respects it does not take place 'in' a community at all. In all cases, however, processing employment tends to be seasonal in nature.

A further complication for attribution of socioeconomic impacts to a regional base is the fact that many workers in many sectors perform groundfish-related work in a region or community other than the locations where they have other socioeconomic ties. It is not uncommon for fishery-related workers to spend little money in their work region and to send pay 'home' to another community or region (and, further, legal residence may or may not be consistent with what people think of as 'home' or what may be considered 'home' in terms of where economic benefits ultimately accrue). In this sense, regional employment is indicative of the volume of economic activity, if not a specific level of labor activity directly comparable to other industries. The importance of this flow varies from region to region and from sector to sector, but is most apparent for the communities that are most heavily engaged in the processing aspect of the groundfish fishery.

Tax and Revenue. Tax and revenue information is presented for each Alaska region to provide a perspective on the role of the groundfish fishery in the underpinning of the local economy. Data are from the Alaska Department of Revenue (ADOR), DCED, and local sources, as appropriate. Information on the local tax structure of each relevant community is provided, and the communities and regions vary in the way that direct revenue is collected on fishery-related transactions that occur in the regions. For communities (and boroughs) in the western Alaska regions, a local fish tax is often a significant source of local revenue. For other regions, direct revenue benefits are more closely tied to the state fish tax. Information is provided for each region on shared taxes and the role of state shared fish tax in relation to these other taxes. Again, there is considerable variability from region to region. Also apparent is the regional differentiation in the importance of the relatively new fishery resource landing tax. This source of revenue comes from the offshore sectors of the fishery, is designed to capture some of the economic benefits of offshore activity for adjacent coastal Alaska regions, and is far more important to the revenue structure of the AKAPAI region than for any other region.

Inshore Processing. Inshore groundfish processing information is presented for each region to facilitate analysis of the volume and value of the groundfish that are landed in a region. The information is broken out by species, and historical information is provided on utilization rate, product value, and value per ton. When examined on a region-by-region basis, these data point out that the groundfish fishery varies widely from one region to another. For example, for AKAPAI, local groundfish processing activity is relatively focused on pollock, while in AKSE, the fishery is focused much more on the non-pollock, non-cod, non-flatfish, "other" (ARSO) species. Therefore, there are sharp differences in value per ton (over eight times greater in AKSE) and in volume (greater in AKAPAI, which accounts for 80 percent of the total volume for the state). These differences correspond with differences in a number of other factors, including the extent to which a local labor force is used in processing and the degree to which a local fleet is harvesting the resource (both measures are high in AKSE, but low in AKAPAI). Overall, this information is useful in looking at where fishery resources come ashore, and can be used as a rough indicator of the economic activity generated in processing communities. The relative amount of economic benefit to regions and specific communities varies considerably from place to place, as processing entities are articulated with communities in different ways in different places, and patterns of ownership influence the flow of economic benefits.

Processor Ownership. In part to address the flow of economic benefits and to help characterize them on a regional basis, ownership information is presented for processing entities by region. Caution must be taken in interpreting this information, however, as assignment of entities to regions is based on ownership address information, and this is known to be less than precise in a number of cases due to different criteria for assigning addresses. Also, for entities with ownership interest divided among entities residing in two or more regions, the entire operation was counted for the region with the majority of the ownership interest (and

therefore caution must be exercised in the use of this information and this known shortcoming taken into account in interpretation of results). This information includes all processing sectors, both fixed processors in communities and mobile, at-sea processors (motherships and various catcher processor sectors). This information is presented by region, by sector, and by groundfish species. The data in this section facilitate consideration of how resource utilization is linked to ownership patterns and how those ownership patterns play out among regions. For example, AKAPAI has the greatest volume and value processed inshore among all the regions, but ownership of shore processing facilities in this region is highly concentrated among individuals and firms located in the WAIW region. The large mobile processors that work the Bering Sea have varying catch and processing locations and at least some ties to adjacent Alaska regions (through CDQ group ownership interest, for example), but ownership again clearly shows predominant ties to the Pacific Northwest. Combining all types of processors (inshore, mothership, and offshore), processors owned by WAIW residents accounted for 96 percent of total reported tons and 94 percent estimated wholesale value of all North Pacific groundfish processed in 1999.

Catcher Vessel Ownership and Activity. Information on catcher vessel ownership patterns is presented to demonstrate the links between resource harvesting and specific regions. As for processors, region of ownership is based on the address of record of the majority owner, so some caution in the interpretation of this information is warranted. It is not unusual for vessels to have complex ownership structures involving more than one entity in more than one region, but the region of majority ownership provides a rough indicator of the direction or nature of ownership ties when patterns are viewed at the sector or vessel class level. Data are presented on the number and types of vessels in the regionally owned fleet and the employment and payments to labor that result from catcher vessel resource activities. Resources from FMP subregions adjacent to the AKAPAI, AKKO, and other Alaska regions are not uniformly harvested by catcher vessels from those regions. Different regions have varying combinations of local harvesting activity, local processing activity, and ownership of both harvesting and processing entities, and all of these have implications for the role of the groundfish fishery in the local socioeconomic context. For example, in terms of groundfish harvest value and volume, AKAPAI features a mostly nonresidential fleet, except for some of the smaller vessel classes. While the highest volume and value of groundfish resources harvest occur near this region, the catcher vessels accounting for most of this activity are from elsewhere (primarily WAIW and ORCO). As discussed in the individual region profiles, the higher the catcher vessel harvest volume in a given area, the less 'local' the fleet tends to be. Put another way, the more important the region is to the overall groundfish fishery, the lower the proportion of total catch is likely to be harvested by the local fleet in that region, although recent CDQ partnership arrangements may serve to ameliorate this historical disjunction.

Information on total groundfish harvest by FMP area for each region is provided to allow consideration of distribution of effort by the fleets of the individual regions in different groundfish management areas. In other words, this information facilitates gauging the relative importance of groundfish from each management area to the catcher vessel fleets based in each region. Regions vary widely in how 'local' the catch effort is by the local fleet. For example, catcher vessels in AKSE have a very high concentration of effort in the Eastern Gulf of Alaska FMP area, while efforts of catcher vessels based in Kodiak are more wide-ranging. More detailed regional harvest of Pacific cod and pollock, the two most important groundfish species for SSL interactions, is also provided by FMP. Total regional groundfish harvest is also broken out by species so that relative dependency on species by area can be assessed. In this way, relative dependence on alternative measure impacted resources can be examined, at least in general terms.

Harvest Diversity. Extended sector and regional profiles contained in the Groundfish SEIS (Appendix I) include a treatment of diversity in the catcher vessel fleet, and discusses a brief treatment of the annual cycle

for groundfish catcher vessels and information on how groundfish fit into that cycle both in terms of timing and value. Information is also presented on how groundfish has fit into overall catcher vessel effort for groundfish catcher vessels over the last several years so that the relative role of groundfish can be seen over time. This information is abstracted for this document, and clearly shows that the relative importance illustrates marked differences between regions.

Processor Diversity. Diversity information similar to that presented for catcher vessels is also presented in the Groundfish SEIS (Appendix I) for processors for each of the regions to allow at least a general-level consideration of the relative importance of groundfish, and that information is abstracted in this document. For the larger Bering Sea pollock inshore plants, for example, groundfish accounted for more than 60 percent of total ex-vessel value over the period 1995-1997, while in AKSE, analogous value ranged from 10 to 35 percent over the period 1991-1998. The estimates provided in also indicate the amount of groundfish and non-groundfish processed at all regional processors that take deliveries of at least some quantity of groundfish.[1] We have examined changes in patterns of processor diversity to a limited degree, as they are more clearly associated with local community effects.

Subsistence. Each Alaska region profile contains a brief summary of subsistence resource use for selected communities with known ties to the groundfish fishery. The basic data used for this description were taken from the ADF&G subsistence database. The management of the consumptive use of subsistence resources in Alaska is complex, and is summarized in Appendix I of the Groundfish SEIS (NMFS, 2001a). Groundfish comprise up to 9 percent of total subsistence resources consumed in some communities. Level of Steller sea lion take for subsistence purposes in Alaska coastal communities is mentioned in each of the regional profiles, but is described in more detail in Appendix F(3) of this document.

Tables 3.12-2 through 3.12-7 present information on participation in the groundfish fishery by region for processing and catcher vessel sectors. Parallel tables are presented for each of the individual regions and provide time series information on most of these same indicators. Confidentiality has been preserved for vessels and processors with few members in any particular class or sector by using a normative value for operations within a particular class that are then adjusted regionally so that regional subtotals will match the actual regional total.

[1] A summary analysis of processors within the four Alaskan regions defined in this study revealed that shore based processors that took deliveries of at least some amount of groundfish accounted for approximately 77 percent of all non-groundfish processed at shore based processors within those regions.

Table 3.12-2 Selected North Pacific groundfish participation measures by region, 1999

	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	Total
Processor Employment and Payments to Labor							
Employment (Est. FTEs)	2,648	749	170	112	3,718	0	7,397
Payments to Labor ($Millions)	113.0	26.8	13.5	12.6	245.8	0	411.7
Groundfish Processing by Regional Inshore Plants							
Reported MT (Thousands)	544.0	116.7	10.82	4.75	NA	NA	676.27
Product MT (Thousands)	191.0	31.4	6.64	3.51	NA	NA	232.55
Utilization Rate (Percent)	0.35	0.27	0.61	0.74	NA	NA	NA
Product Value ($Millions)	376.3	94.7	29.77	26.91	NA	NA	527.68
Value per Ton ($)	692	811	2,751	5,665	NA	NA	780.28
Processors Owned by Regional Residents							
No. of Processors Owned	4	9	13	10	109	0	145
Reported Tons (Thousands)	0.54	34.3	24.40	11.14	1,553	0	1,623.38
Wholesale Value ($Millions)	0.53	24.8	33.59	18.12	1,120	0	1,197.04
Catcher Vessels Owned by Regional Residents							
No. of Catcher Vessels	67	158	170	235	262	42	934
Retained Tons (Thousands)	24.5	69.5	12.4	6.3	547.1	72.6	732.4
Ex-vessel Value ($Millions)	10.12	30.0	10.31	17.67	140.0	24.07	232.17
Employment (Persons)	306	797	820	1,328	1,258	198	4,707
Payments to Labor ($Millions)	4.05	12.0	4.12	7.07	55.99	9.63	92.86

Notes: 1) Includes all employment at all shoreplants located in the region and all employment of at-sea processors (including floaters) owned by residents. In addition the estimate includes administrative employment of all processors owned by residents. 2) All payments to labor from at-sea processors (including floaters) are assigned to the owners region. On-site payments to labor from shore plants are assigned to the region in which the plant is located.

Source: For processing information, NMFS Blend Data and WPR Data, June 2001 and Northern Economics (1994) internally derived tables. For harvest information, ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include “ghost” entities, while weight information includes “ghost” entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-3 Groundfish harvests delivered to inshore plants by species, 1999

Region	Total Reported Harvest by Species									
	Thousands of Tons					Millions of Dollars				
	ARSO	Flatfish	Pacific Cod	Pollock	Total	ARSO	Flatfish	Pacific Cod	Pollock	Total
AKAPAI	8.4	5.0	56.11	474.4	543.92	5.58	1.2	81.87	287.66	376.31
AKKO	11.69	10.08	35.18	59.75	116.71	11.0	3.34	50.26	30.06	94.65
AKSC	4.58	0.87	3.34	2.03	10.82	20.61	0.21	6.13	2.81	29.77
AKSE	4.38	0.25	0.12	0	4.75	26.72	0	0.19	0	26.91
WAIW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORCO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total	**29.05**	**16.2**	**94.75**	**536.18**	**676.20**	**63.91**	**4.75**	**138.45**	**320.53**	**527.64**

Source: NMFS Blend Data and WPR Data, June 2001.

Table 3.12-4 Groundfish wholesale value of regionally owned processors by processor class, 1999

Processor Class	Region						
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	Total
Catcher/Processors	0.08	23.00	2.04	10.96	571.07	0	607.15
Motherships	0	0	0	0	57.92	0	57.92
Shoreplants	0.45	1.75	31.56	7.16	490.81	0	531.73

Note: Value - $Millions.
Source: Derived tables, Northern Economics (1994); adapted from NMFS Blend Data and WPR Data, June 2001.

Table 3.12-5 Groundfish retained harvest by catcher vessels owned by residents of various regions by FMP subarea, 1999

	AI	BS	WG	CG	EG	Total
Total Ex-Vessel Value ($Millions)						
AKAPAI	0	0.40	8.65	0.77	*	10.12
AKKO	0.79	4.83	0.78	22.98	0.66	30.04
AKSC	0.34	0.36	1.01	8.19	0.40	10.31
AKSE	0.15	0.16	0.70	4.07	12.59	17.67
WAIW	4.98	106.18	7.69	13.76	7.36	139.97
ORCO	0	13.16	0.34	9.05	*	22.78
Total	**6.26**	**125.09**	**19.17**	**58.82**	**21.01**	**230.89**

Note: *Due to the confidentiality of the data presented, this value has been suppressed.
Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001

Table 3.12-6 Number of boats and retained catch by weight and value, by species group, by catcher vessel ownership, and by region, 1999

Data	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO
ARSO						
Number of Catcher Vessels	20	93	129	229	205	37
Retained Tons (Thousands)	0.1	3.5	1.3	4.3	6.1	1.5
Ex-vessel Value ($Millions)	0.42	4.48	3.71	16.48	16.58	1.24
Flatfish						
Number of Catcher Vessels	15	35	7	13	104	29
Retained Tons (Thousands)	0	2.2	0.2	0.1	3.4	1.7
Ex-vessel Value ($Millions)	0	0.59	0.09	0.03	0.50	0.35
Pacific Cod						
Number of Catcher Vessels	67	150	151	107	191	31
Retained Tons (Thousands)	14.5	27.5	8.1	1.9	40.8	18.5
Ex-vessel Value ($Millions)	7.54	17.67	5.91	1.15	21.82	10.23
Pollock						
No. of Catcher Vessels	19	62	31	13	109	27
Retained Tons (Thousands)	9.8	36.3	2.8	0	496.9	53.0
Ex-vessel Value ($Millions)	2.15	7.29	0.60	0.01	101.07	10.96
All Groundfish Species						
Total Number of Catcher Vessels	67	158	170	235	262	39
Total Retained Tons (Thousands)	24.5	69.5	12.4	6.3	547.1	74.7
Total Ex-vessel Value ($Millions)	10.12	30.04	10.31	17.67	139.97	22.78

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001.

Table 3.12-7 Retained harvests by FMP area and species of regional catcher vessels, 1999

Region of Catcher Vessel Owner	FMP Area										Total
	Aleutian Islands		Bering Sea		Western Gulf		Central Gulf		Eastern Gulf		
	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	
Volume (Thousands of Tons)											
APAI	0.12	0	0.46	0.59	9.60	5.86	3.81	3.82	0.02	0.05	24.34
AKKO	1.60	0.01	6.70	14.57	4.43	3.30	14.00	18.78	0.10	0.26	63.75
AKSC	0.38	0	1.48	0.71	0.94	0.29	5.28	1.70	0.06	0.03	10.87
AKSE	0.06	0	0.07	0.06	0.37	0.13	1.18	0.04	0.02	0	1.94
WAIW	5.49	0.01	21.61	462.51	5.91	10.83	10.13	19.99	0.04	1.15	537.67
ORC	1.68	0.03	6.77	34.11	0.73	2.51	5.72	19.81	0.01	0.10	71.47
Value ($Millions)											
APAI	0.07	0	0.26	0.12	4.75	1.25	2.43	0.78	0.01	0.01	9.69
AKKO	0.94	0	3.87	3.05	2.43	0.75	9.69	4.11	0.07	0.06	24.97
AKSC	0.25	0	0.96	0.16	0.58	0.07	4.04	0.40	0.05	0.01	6.51
AKSE	0.03	0	0.04	0.01	0.20	0.03	0.83	0.01	0.01	0	1.16
WAIW	2.82	0	11.02	92.73	3.01	2.32	6.58	4.16	0.03	0.23	122.89
ORC	0.93	0.01	3.70	7.27	0.40	0.58	3.83	4.45	0.01	0.02	21.19

Source: Spreadsheet from Northern Economics (1994) adapted from ADF&G Fish Tickets and NMFS Observer Data, June 2001.

In general, there are a number of other "big picture" points to keep in mind when constructing a baseline for examining community impacts that may result from various Steller sea lion protection-related management alternatives. Among these are the fact that some aspects of the industry can not be 'held equal,' although they are clearly important. First, in trying to isolate community impacts by looking at the intersection of communities and sector entities, the picture is complicated by entities that have a presence in multiple areas, such as both the BSAI and GOA areas, that may experience different types of impacts. Second, some entities have a presence in two or more different sectors (CV's, CP's and shore processing), such that impacts that may be seen as accruing to one sector may be influenced by other sector changes. Third, entities in the groundfish fishery differ markedly in the degree to which they participate in and depend on other fisheries. This, of course, helps to determine the magnitude of impacts - or the consequences of impacts - experienced by the individual entities and communities. Other types of factors that confound the analysis in fundamental ways are aspects of the fisheries context that are outside of the control of the entities engaged in the fishery. As mentioned above, AFA-related consequences have recently changed the fishery in a number of ways at approximately the same time that Steller sea lion RPA impacts were being realized. Also, Area M salmon changes have had interactive impacts on alternative measure influenced entities and communities. In sum, while Steller sea lion-related management measures do have significant effects on the groundfish fishery, which will be discussed in this document, there are known limitations on the degree to which recent sector and community changes can be attributed to these measures.

3.12.2.3 Alaska Peninsula and Aleutian Islands Region

Overview. AKAPAI region, shown in Figure 3.12-4, is in several ways the center of the Alaska groundfish fishery in general and the Bering Sea pollock fishery in particular. The adjacent FMP area features the greatest groundfish harvest, and it sees significant activity from both onshore and offshore fishery sectors. In 1999, the region accounted for 80 percent by volume and 71 percent by value of all groundfish processed in Alaska. During 1992-2000, this region accounted for more than four times the volume of groundfish processed inshore than in the other Alaska regions combined. This volume includes 89 percent of the pollock, 68 percent of the Pacific cod, 42 percent of the flatfish, and 31 percent of the ARSO processed. The relative dependence of regional communities on the groundfish fishery varies greatly. While four of Alaska's top five groundfish landing ports are in this region, some other communities in the region have little, if any, direct involvement with the fishery. Extended profiles of the regionally important groundfish communities of Unalaska/Dutch Harbor, Akutan, King Cove, and Sand Point are provided in Appendix F(1). No groundfish data are yet available for False Pass, but it is known that substantial processing investment has been made in the community, and groundfish is being locally processed during 2001. Groundfish has not been a major focus of processing in St. Paul in recent years, but groundfish do appear in the processing reports for 2000.[2] Additionally Adak, a former military community, has become a significant regional processor of groundfish in the recent past. Although production figures are confidential, it is common knowledge that although no groundfish were landed in the community prior to 1998, it has since become a significant and growing purchaser of groundfish, particularly cod, within the region. This community is quite different in sociocultural terms from the other communities of the region, given its recent development as an industrial site on a converted military base rather than within or adjacent to a traditional community. It is also important to note that within this region the Aleutians East Borough encompasses the communities of Akutan, Cold Bay, False Pass, King Cove, Nelson Lagoon, and Sand Point. Given that changes in tax revenue resulting from changes in groundfish landing patterns in one community within the borough is directly linked to expenditures in other communities in the borough (for example, a decline in fish tax revenue in King Cove paid to the Borough would impact Nelson Lagoon if it were large enough to necessitate reductions in school expenditures), the borough structure would serve to distribute impacts to communities in a different way than seen in the rest of the region that has no such structure.

[2] It is worth noting that Chignik - although not geographically in the region, it is lumped analytically in regional totals for the fishery - does run some groundfish as well, but like St. Paul this is clearly not the main focus of local processing. Brief information on the Chignik groundfish fleet is provided in Appendix F(1).

Click on the associated link in the left column to download the figure or table.

Population. The AKAPAI region has the smallest population (6,092 in 1999) of the four Alaska regions characterized. The regional population has declined in recent years with the closure of the military installation at Adak, formerly the largest community in the region. Unalaska (population 4,283 in 2000) is the largest community in the region, and the number one fishing port in the nation for value and volume of catch landed. Of the other four communities with more than 200 residents in 2000, three (Akutan [population 713], King Cove [population 792], and Sand Point [population 842, the second largest community in the region]) are substantially involved with the groundfish fishery and are the sites of large processing facilities. These communities have a disproportionately male population, consistent with a predominantly male workforce at the seafood plants that, in turn, comprises a significant proportion of the total community population. Although they vary between plants and communities, processor workforces tend to be made up of short-term residents housed in industrial-enclave-type settings.

Employment and Income. AKAPAI communities have a wide range of employment opportunities and income levels. These opportunities are closely related to the commercial fishery in general, and the groundfish fishery in particular. Communities with sizeable seafood processing operations (Akutan, King Cove, Sand Point, and Unalaska) have very low official unemployment rates. Processing workers tend to be in the community because of the employment opportunity, tend to leave when employment terminates, and comprise a significant portion of the population. Among civilian employment sectors, manufacturing, typically associated with seafood processing in this region, has dominated employment. In 1999, 2,958 persons were employed in manufacturing, almost five times as many as in the next most important sector, state and local government. Regional personal income and earnings from manufacturing exceeded earnings of all other sectors combined in 1999.

Tax and Revenue. Commercial-fisheries-related taxes are important to the region in absolute and relative terms. Akutan, King Cove, Sand Point, and Unalaska all have local raw fish taxes, and the first three are also subject to a borough raw fish landing tax. Fisheries-related shared taxes accounted for 99.7 percent of all the shared taxes and fees coming to the region from the state in 1999, and total fisheries-related tax revenues exceeded $7 million. The offshore processing component paid more than $2 million in Fisheries Resource Landing tax in 1999. This tax is considerably more important in AKAPAI, in both absolute and relative terms, than for any other Alaska region.

Inshore Processing. In AKAPAI in 1999, pollock comprised more than 87 percent of the groundfish volume processed, Pacific cod 10 percent, and ARSO and flatfish 2 percent and 1 percent, respectively. This pattern by species varies considerably from those of other Alaska regions. With 544,000 total reported metric tons of groundfish processed and 191,000 metric tons of total groundfish final product in 1999, AKAPAI dominates the other regions in inshore processing. With a total product value of $376 million and a value of $692 per metric ton, this region has the highest total value (reflecting enormous volume processed) and the lowest value per ton (reflecting disproportionate dependence on pollock). Within this region, shoreplants are divided into two subsectors: the Bering Sea pollock shoreplants, and the Alaska Peninsula/Aleutian inshore plants, based on distinctive operational profiles. The Bering Sea pollock shoreplants include three large shore processors in Unalaska, one large shore processor in Akutan, one floating processor currently (2001) in Beaver Inlet on Unalaska Island, and one floating processor in Akutan Bay. These same plants have operated every year during the 1992-2000 period (although one of the floaters has moved from Beaver Inlet to Akutan Bay during this time). The Alaska Peninsula/Aleutian inshore plants are all other groundfish plants in the region (Aleutians East Borough and the Aleutians West Census Area) exclusive of the six Bering Sea plants (and including the plants in Sand Point and King Cove, among others). The Bering Sea plants dominate processing in the region (and, indeed, the state) in terms of volume of groundfish processed. The number of smaller plants in the region has varied from 5 to 8 per year from 1992 to 2000. In 2000, eight

Alaska Peninsula/Aleutian inshore plants (i.e., the regional non-Bering Sea pollock sector plants) reported processing groundfish in Adak (1), Chignik (1), Unalaska/Dutch Harbor (3), King Cove (1), Sand Point (1), and St. Paul (1).

Processor Ownership. Though the center of both onshore and offshore groundfish processing activity, AKAPAI has by far the least ownership of groundfish processing entities of any Alaska region. None of the largest shore plants are owned by resident entities, and the number of smaller inshore plants regionally-owned varied between zero and six per year over the period 1992-2000. To the extent that economic benefits flow to the location of ownership, most of these benefits leave the region. In terms of reported tons in 1999, groundfish processed by inshore plants owned by residents of the region was equal to less than one-tenth of one percent of the total groundfish processed at plants located in the region. Offshore processing in the region displays the same pattern. Regionally owned shoreplants had a wholesale product value of approximately $0.45 million in 1999, while the analogous figures for catcher-processors and motherships were $80,000 and $0, respectively.

Catcher Vessel Ownership and Activity. Groundfish catcher vessel ownership is lower in AKAPAI than in any other region. In recent years, none of the AFA trawl catcher vessels (which supply a very large proportion of the groundfish processed in the region) have been locally owned. Ownership is clustered in two vessel classes (TCV 60' and FGCV 33'-59') that tend to work the nearshore fisheries in the GOA. Vessel ownership within the region is strongly clustered in Sand Point and King Cove, with a secondary cluster in Unalaska. Sand Point residents owned 49 percent of the regionally owned groundfish vessels that, in turn, accounted for 59 percent of the total regionally owned vessel value landed during the period 1992-2000. King Cove residents owned 24 percent of the vessels that, in turn, accounted for 23 percent of the regionally owned vessel landings value over this same period. Analogous figures for Unalaska were 21 percent of regional vessels and 14 percent of regionally owned vessel landings value, respectively. No other community accounted for more than 3 percent of regional vessels or 1 percent of regional value landed by regionally owned vessels. In 1999, these vessels employed 306 persons, with $4 million in payments to labor in groundfish. In 1999, 85 percent of the retained harvest from these vessels came from the Western Gulf FMP area. About 59 percent retained harvest was Pacific cod, and 40 percent was pollock. For that same year, Pacific cod accounted for 74 percent of total groundfish value, and pollock 21 percent. (Additional existing conditions information on the Unalaska/Dutch Harbor small boat fleet relevant to the specific analysis of Alternative 4/Option 2 [Unalaska/Dutch Harbor/Area 9 small boat exemption] is presented in Sections 1.1 and 1.4 of Appendix F[1].)

Harvest Diversity. For groundfish catcher vessels owned by regional residents, groundfish has accounted for roughly half of the ex-vessel value for major fisheries since 1996, a substantial increase over the early 1990s. These vessels are primarily dependent on the groundfish and salmon fisheries, as each of these two fisheries is economically more important by a factor of four or more than any other fishery. About 7 out of 10 vessels participated in the salmon fishery, about one-third in the halibut fishery, and about one-quarter in crab or other fisheries (Groundfish SEIS, Appendix I).

Processing Diversity. For the smaller groundfish processing plants in the region, groundfish roughly accounted for between 10 and 25 percent of ex-vessel value of landings during 1991-1998, with a general increase over this period. In 1998, groundfish accounted for 23 percent of value, while salmon and crab accounted for 30 and 44 percent, respectively. For the larger Bering Sea pollock inshore plants, groundfish has accounted for more than 50 percent of ex-vessel value of landings from 1991-1998, and well over 60 percent of value for 1995-1997. At these larger plants in 1998, crab accounted for roughly the same proportion of total value as in the smaller AKAPAI inshore plants, and groundfish alone accounted for

roughly the same value as groundfish and salmon combined in the smaller plants (Groundfish SEIS, Appendix I).

Subsistence. Akutan, King Cove, Sand Point, and Unalaska have a subsistence resource consumption ranging from about 200 pounds per capita to more than 450 pounds per capita. Of this total, groundfish specifically ranges from 4 to 9 percent of the total. Subsistence use of Steller sea lions is not well documented, but is heaviest in Southwest Alaska and is historically concentrated among relatively few communities (Atka, Akutan, St. George, St. Paul, and Unalaska). Such use has decreased significantly since 1992 (see Appendix F(3)).

Tables 3.12-8 through 3.12-13 summarize information on the AKAPAI regional engagement with the groundfish fishery through 2000.

Table 3.12-8 North Pacific groundfish fishery participation measures for Alaska Peninsula/ Aleutian Islands region, 1992-2000

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Processor Employment and Payments to Labor									
Employment (Est. FTEs)	2,053	1,947	2,273	2,532	2,645	2,544	2,313	2,648	3,157
Payment to Labor ($Millions)	112.9	65.4	88.5	116.2	99.7	99.3	85.1	113.0	131.3
Groundfish Processing by Regional Inshore Plants									
Reported Tons (Thousands)	516.5	534.1	551.6	567.0	548.2	532.5	486.4	544.0	590.6
Product (Thousands of Tons)	153.1	152.7	172.7	183.2	177.7	176.2	165.2	191.0	217.1
Utilization Rate (Percent)	0.3	0.29	0.31	0.32	0.32	0.33	0.34	0.35	0.37
Product Value ($Millions)	374.0	217.9	291.3	386.6	331.6	330.5	283.1	376.3	437.2
Value per Ton ($)	724	408	528	682	605	621	582	692	740
Processors Owned by Regional Residents									
No. of Processors Owned	1	0	2	6	5	4	4	4	4
Reported Tons (Thousands)	0	*	*	1.89	1.98	1.42	0.90	0.54	0.74
Wholesale Value ($Millions)	0	*	*	1.52	1.40	1.18	0.81	0.53	0.83
Catcher Vessels Owned by Regional Residents									
No. of Catcher Vessels	61	46	60	71	70	74	76	67	70
Retained Tons (Thousands)	14.1	12.0	14.8	13.4	23.7	28.9	27.8	24.5	20.3
Ex-vessel Value ($Millions)	5.74	3.47	4.38	4.98	8.02	9.86	7.39	10.12	9.86
Employment (Persons)	320	201	305	352	351	382	351	306	318
Payment to Labor ($Millions)	2.3	1.39	1.75	1.99	3.21	3.95	2.96	4.05	3.94

Notes: 1) Includes all employment at all shoreplants located in the region and all employment of at-sea processors (including floaters) owned by residents. In addition the estimate includes administrative employment of all processors owned by residents. 2) All payments to labor from at-sea processors (including floaters) are assigned to the owners region. On-site payments to labor from shore plants are assigned to the region in which the plant is located.
Source: For processing information, NMFS Blend Data and WPR Data, June 2001 and Northern Economics (1994) internally derived tables. For harvest information, ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include "ghost" entities, while weight information includes "ghost" entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-9 Groundfish reported by Alaska Peninsula/Aleutian Islands region inshore plants by species group

Groundfish Reported	Species Group				
	ARSO	Flatfish	Pacific Cod	Pollock	Total
1999 tons (Thousands)	8.4	5.0	56.11	474.4	543.92
1999 Product Value ($Millions)	5.58	1.2	81.87	287.66	376.31
2000 Tons (Thousands)	5.95	5.87	56.73	522.08	590.63
2000 Product Value ($Millions)	6.88	1.61	80.48	348.28	437.24

Source: NMFS Blend Data and WPR Data, June 2001.

Table 3.12-10 Groundfish wholesale value of processor class owned by residents of the Alaska Peninsula/Aleutian Islands region, 1992-2000

	Year								
Processor Class	1992	1993	1994	1995	1996	1997	1998	1999	2000
Catcher/Processors	0.16	0	0.05	0.51	0.41	0.36	0.12	0.08	0.60
Motherships	0	0	0	0	0	0	0	0	0
Shoreplants	0	0	0.25	1.01	0.99	0.82	0.69	0.45	0.23

Note: Value - $Millions.
Source: Derived tables, Northern Economics (1994) adapted from NMFS Blend Data and WPR Data, June 2001.

Table 3.12-11 Groundfish retained harvest ex-vessel value, catcher vessels owned by Alaska Peninsula/Aleutian Islands region residents by FMP subarea, 1999-2000

	FMP Subarea					
Retained Harvest	AI	BS	WG	CG	EG	Total
1999 Ex-vessel ($Millions)	0	0.40	8.65	0.77	*	10.12
2000 Ex-vessel ($Millions)	0	0.65	9.09	0.08	*	9.86

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001

Table 3.12-12 Number of boats and retained catch by weight and value, by species group, and by catcher vessel ownership for the Alaska Peninsula/ Aleutian Islands region

Data	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
ARSO									
Number of Catcher Vessels	16	8	11	9	20	24	16	20	19
Retained Tons (Thousands)	0.1	0.1	0.1	0.2	0.4	0.1	0.2	0.1	0
Ex-vessel Value ($Millions)	0.31	0.18	0.26	0.70	0.79	0.59	0.32	0.42	0.05
Flatfish									
Number of Catcher Vessels	2	3	7	6	12	24	15	15	15
Retained Tons (Thousands)	0	*	0.1	0	1.7	0.1	0	0	0.1
Ex-vessel Value ($Millions)	0	*	0.04	0.01	0.92	0.02	0	0	0
Pacific Cod									
Number of Catcher Vessels	60	45	58	70	67	74	73	67	70
Retained Tons (Thousands)	12.3	8.5	10.0	8.3	13.9	17.0	16.3	14.5	11.5
Ex-vessel Value ($Millions)	5.21	2.85	3.35	3.38	4.85	6.52	5.53	7.54	7.60
Pollock									
Number of Catcher Vessels	12	8	10	12	13	29	23	19	19
Retained Tons (Thousands)	1.6	3.4	4.6	4.9	7.8	11.6	11.2	9.8	8.7
Ex-vessel Value ($Millions)	0.22	0.45	0.74	0.88	1.45	2.73	1.55	2.15	2.21
All Groundfish Species									
Total Number of Catcher Vessels	61	46	60	71	70	74	76	67	70
Total Retained Tons (Thousands)	14.1	12.0	14.8	13.4	23.7	28.9	27.8	24.5	20.3
Total Ex-vessel Value ($Millions)	5.74	3.47	4.38	4.98	8.02	9.86	7.39	10.12	9.86

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include "ghost" entities, while weight information includes "ghost" entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-13 Retained harvests by FMP area and species of Alaska Peninsula/Aleutian Islands region catcher vessels

Year	FMP Area										Total
	Aleutian Islands		Bering Sea		Western Gulf		Central Gulf		Eastern Gulf		
	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	
Volume (Thousands of Tons)											
1992	0	0	0.62	0.44	6.18	0.24	4.02	2.43	0.02	0	13.95
1993	0.02	0.06	0.35	3.68	3.12	1.21	1.96	1.52	0.01	0	11.94
1994	0.01	0.06	0.56	4.11	2.74	1.76	2.70	2.64	0.02	0.04	14.63
1995	0	0	0.86	0.23	2.47	2.67	4.66	2.28	0.01	0	13.20
1996	0	0	1.34	0.52	6.79	4.61	6.07	2.32	0.03	0	21.68
1997	0.03	0	1.29	0.24	9.21	3.92	6.25	7.59	0.04	0.07	28.64
1998	0	0	0.47	0.31	8.36	4.18	4.93	9.20	0.03	0.02	27.50
1999	0.12	0	0.46	0.59	9.60	5.86	3.81	3.82	0.02	0.05	24.34
2000	0.22	0	0.44	1.49	8.19	5.38	2.46	1.85	0.02	0.13	20.20
Value ($Millions)											
1992	0	0	0.28	0.09	2.56	0.05	1.80	0.64	0.02	0	5.43
1993	0.01	0.01	0.14	0.62	1.21	0.19	0.82	0.29	0.01	0	3.29
1994	0	0.01	0.24	0.80	1.04	0.36	1.07	0.54	0.01	0.01	4.09
1995	0	0	0.33	0.05	0.92	0.46	2.01	0.48	0.01	0	4.26
1996	0	0	0.50	0.08	2.12	0.81	2.31	0.45	0.03	0	6.30
1997	0.03	0	0.71	0.05	3.24	0.87	2.64	1.66	0.03	0.01	9.25
1998	0	0	0.19	0.04	2.85	0.60	1.96	1.40	0.02	0	7.07
1999	0.07	0	0.26	0.12	4.75	1.25	2.43	0.78	0.01	0.01	9.69
2000	0.15	0	0.28	0.37	5.33	1.34	1.84	0.45	0.02	0.03	9.80

Source:

3.12.2.4 Kodiak Island Region

Overview. AKKO encompasses the Kodiak Island Borough (KIB), which includes Kodiak Island, other parts of the Kodiak archipelago, and a portion of the Alaska Peninsula, as shown in Figure 3.12-5. Linkages between this region and the groundfish fishery are predominantly associated with the City of Kodiak and its suburbs. Kodiak is the dominant GOA fishing community for groundfish, and is important for salmon, halibut, and other species. In 1999, the region accounted for 22 percent of the volume and 18 percent of the value of the total groundfish processed in Alaska. The region accounted for almost 16 percent of the volume of groundfish processed inshore in all regions of the state (1992-2000). This volume included 11 percent of the pollock, 28 percent of the Pacific cod, 54 percent of the flatfish, and 30 percent of the ARSO category of groundfish processed. Within this region, the City of Kodiak is the location of virtually all of the direct links with the groundfish fishery. (Processing data does show that groundfish are also run at Atilak, but this is a relatively specialized operation and very small relative to the aggregated operations associated with the City of Kodiak.) An extended community profile of Kodiak is provided in Appendix F(1).

Click on the associated link in the left column to download the figure or table.

Population. In 1999, the Kodiak region had a population total of 14,350. The City of Kodiak has become the hub community of the region, at present comprising just less than 50 percent of the KIB population. Furthermore, a significant part of the region's population lives very near Kodiak in unincorporated areas of the KIB. When these areas are taken into account, at present approximately 85 percent of the KIB population lives in and around the City of Kodiak. In ethnicity, the city is about 13 percent Native, while organized communities outside the city are predominantly Native (68 to 94 percent). The predominant minority in the city and its surroundings is Asian and Pacific Islanders, followed by Natives and Blacks. The predominant minority in other regional communities is Caucasian, with few other minorities present.

Employment and Income. The economies of AKKO communities are all heavily dependent on fishing, and for the City of Kodiak, groundfish are an important component of this dependence. In 1999, regional service sector employment outpaced manufacturing, but manufacturing provides more income than any other sector. The fishing sector provides an important base for the retail and government sectors, which follow it in relative size. The military sector is also significant, and is actually second in income and earnings, primarily because of a local Coast Guard base. The City of Kodiak can be distinguished from other regional communities in several ways. Whereas the city has relatively low rates of unemployment and poverty, other communities have higher rates. In terms of income measures, the city ranks highest.

Tax and Revenue. The City of Kodiak and the KIB are the primary taxing entities in the region. City or community services outside the city are quite limited, or are supplied by the KIB or privately. The KIB levies a property tax of 9.25 mills, a 5 percent accommodations tax, and a 0.925 percent severance tax on natural resources. Other communities levy limited taxes. AKKO is also dependent on income from State of Alaska fisheries taxes. The region's share of the fisheries business tax and fishery resource landing tax amounted to $1,330,856 in 1999.

Inshore Processing. Groundfish has made up over 70 percent by weight of the fish processed in the AKKO region. In 1999, pollock comprised about 51 percent of the groundfish by volume. Pacific cod made up about 30 percent, ARSO about 10 percent, and flatfish about 9 percent. This pattern of dependence by species reflects the composition of the groundfish species available. While the volume of groundfish processed in the region is much less than in AKAPAI, value per ton of final product was higher. In terms of value, groundfish has recently comprised 40 to 45 percent of the total fish processed in the AKKO region. Since 1995, one plant has operated at Alitak and the rest of the region's plants reporting groundfish processing (11 in 1999 and 10 in 2000) have operated in Kodiak.

Processing Ownership. Although Kodiak residents own both onshore and offshore processing facilities, onshore plants that process pollock and Pacific cod are owned predominantly by entities outside the region (1995 to present). AKKO residents are active in the ownership of offshore processing vessels for groundfish other than pollock. Residents historically have owned three to six offshore processing facilities, with the lower numbers in earlier years. In 1999, catcher-processors owned by regional residents had a wholesale product value of $23 million, and shoreplants had an analogous figure of $1.75 million. No motherships were owned by regional residents.

Catcher Vessel Ownership and Activity. The AKKO-owned fleet is very diverse. Some vessel classes, especially the larger trawl vessels, have displayed remarkable stability over time. Smaller trawlers have become fewer. Fixed gear vessels have increased in number. Most of the fleet's fishing activity is in the Central Gulf, and product is delivered to Kodiak shore plants. Regional vessel ownership is heavily concentrated in the City of Kodiak, whose residents over the period 1992-2000 owned 87 percent of all regionally owned vessels, and these vessels, in turn, accounted for 95 percent of regionally owned vessels

landings value over this same period. No other community was home to 6 percent or more of the regionally owned vessels, or accounted for more than 2 percent of the total value of the landings of regionally owned vessels over the 1992-2000 period. Since 1991, catcher vessels owned by AKKO residents have harvested a significant amount of fish in the Bering Sea as well. In 1999, the Central Gulf accounted for 76 percent of ex-vessel value, and the Bering Sea accounted for 16 percent. The Aleutian Islands, Western Gulf, and Eastern Gulf areas accounted for 2 to 3 percent each. Pacific cod accounted for 40 percent by volume and 59 percent by value of retained groundfish harvest, while pollock accounted for 52 percent of volume and 24 percent by value.

Harvest Diversity. In terms of the 'annual round' for groundfish catcher vessels owned by residents of AKKO, groundfish and other species tend to complement each other. Groundfish have accounted for less than half of the total ex-vessel value accruing to these vessels in recent years. Halibut, crab, and salmon are also important fisheries to these vessels. More than 50 percent of the groundfish catcher vessels participate in the halibut fishery, and more than 33 percent participate in the salmon fishery (Groundfish SEIS, Appendix I).

Processing Diversity. Groundfish have accounted for roughly 30 to 47 percent of ex-vessel value for all onshore processing plants in AKKO from 1991 to 1999, with a general increase in value over this period. This increased to about 61 percent for 2000 (with the qualification that halibut numbers were not included in the 2000 totals, so that the significance of this increase is suspect). Groundfish are economically more important than any other species or species group. Salmon are second in importance, in some years being close to (or as recently as 1995 exceeding) groundfish in value. Halibut, while relatively more important for AKKO than for AKAPAI, generally accounts for less than 20 percent of the ex-vessel value of fish delivered to shoreplants in AKKO (Groundfish SEIS, Appendix I).

Subsistence. Kodiak is the single regionally important groundfish community. Residents of the City of Kodiak are reported to harvest and consume about 151 pounds of subsistence resource per capita, of which 72 percent is fish. However, groundfish comprise only about 8 percent of the total (12 pounds per capita). Subsistence use of Steller sea lions is not well documented, but has historically been important in the Kodiak region, particularly for the communities of Old Harbor and Akhiok. Such use has decreased since 1992 (see Appendix F(3)).

Tables 3.12-14 through 3.12-19 summarize information on the AKKO regional engagement with the groundfish fishery through 2000.

Table 3.12-14 North Pacific groundfish fishery participation measures for Kodiak region, 1992-2000

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Processor Employment and Payments to Labor									
Employment (Est. FTEs)	562	645	585	708	562	673	749	801	730
Payment to Labor ($Millions)	30.8	30.6	32.4	31.4	25.7	26.2	26.8	33.0	32.1
Groundfish Processing by Regional Inshore Plants									
Reported Tons (Thousands)	106.8	124.9	114.4	82.5	74.8	101.1	115.2	116.7	106.0
Product (Thousands of Tons)	27.1	32.0	28.3	26.4	22.8	25.3	28.8	31.4	29.9
Utilization Rate (Percent)	0.25	0.26	0.25	0.32	0.3	0.25	0.25	0.27	0.28
Product Value ($Millions)	80.3	81.7	85.5	92.0	71.3	76.3	77.7	94.7	89.6
Value per Ton ($)	752	654	747	1115	953	755	674	811	845
Processors Owned by Regional Residents									
Number of Processors Owned	9	9	9	9	7	6	6	9	7
Reported Tons (Thousands)	67.3	73.3	71.5	33.6	29.9	33.8	30.0	34.3	33.1
Wholesale Value ($Millions)	45	41.0	46.1	25.4	22.1	18.3	15.8	24.8	25.5
Catcher Vessels Owned by Regional Residents									
Number of Catcher Vessels	172	130	143	145	144	160	153	158	192
Retained Tons (Thousands)	80.3	77.4	75.5	83.2	82.5	90.8	81.0	69.5	62.7
Ex-vessel Value ($Millions)	28.5	21.1	22.4	27.5	28.3	39.6	22.7	30.0	30.0
Employment (Persons)	856	623	681	709	724	796	749	797	920
Payment to Labor ($Millions)	11.4	8.5	8.9	11.0	11.3	15.9	9.1	12.0	12.0

1) Includes all employment at all shoreplants located in the region and all employment of at-sea processors (including floaters) owned by residents. In addition the estimate includes administrative employment of all processors owned by residents. 2) All payments to labor from at-sea processors (including floaters) are assigned to the owners region. On-site payments to labor from shore plants are assigned to the region in which the plant is located.

Source: For processing information, NMFS Blend Data and WPR Data, June 2001 and Northern Economics (1994) internally derived tables. For harvest information, ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include “ghost” entities, while weight information includes “ghost” entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-15 Groundfish reported by Kodiak region inshore plants by species group

Groundfish Reported	Species Group				
	ARSO	Flatfish	Pacific Cod	Pollock	Total
1999 Tons (Thousands)	11.69	10.08	35.18	59.75	116.71
1999 Product Value ($Millions)	11	3.34	50.26	30.06	94.65
2000 Tons (Thousands)	14.13	14.2	26.82	50.82	105.97
2000 Product Value ($Millions)	13.33	8.97	40.06	27.21	89.57

Source: NMFS Blend Data and WPR Data, June 2001.

Table 3.12-16 Groundfish wholesale value of processor class owned by residents of the Kodiak region, 1992-2000

Processor Class	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
Catcher/Processors	11.12	13.62	14.36	15.81	18.19	15.96	13.40	23.00	22.65
Motherships	0	0	0	0	0	0	0	0	0
Shoreplants	33.91	27.32	31.75	9.59	3.90	2.30	2.35	1.75	2.82

Note: Value - $Millions.
Source: Derived tables, Northern Economics (1994) adapted from NMFS Blend Data and WPR Data, June 2001.

Table 3.12-17 Groundfish retained harvest ex-vessel value, catcher vessels owned by Kodiak region residents by FMP subarea, 1999-2000

Retained Harvest	FMP Subarea					
	AI	BS	WG	CG	EG	Total
1999 Ex-vessel ($Millions)	0.79	4.83	0.78	22.98	0.66	30.04
2000 Ex-vessel ($Millions)	0.3	4.25	1.12	23.32	1.08	30.07

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001

Table 3.12-18 Number of boats and retained catch by weight and value, by species group, and by catcher vessel ownership for the Kodiak region

Data	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
ARSO									
Number of Catcher Vessels	113	83	106	83	91	111	108	93	99
Retained Tons (Thousands)	2.5	2.2	2.4	1.6	4.2	4.9	4.4	3.5	5.9
Ex-vessel Value ($Millions)	4.93	4.37	6.30	4.22	7.29	7.76	4.69	4.48	6.47
Flatfish									
Number of Catcher Vessels	38	34	39	45	52	53	46	35	34
Retained Tons (Thousands)	9.7	6.3	4.5	6.0	7.2	11.5	4.5	2.2	5.6
Ex-vessel Value ($Millions)	3.33	1.96	1.41	1.74	2.58	7.38	1.28	0.59	1.06
Pacific Cod									
Number of Catcher Vessels	149	103	105	136	127	150	144	150	190
Retained Tons (Thousands)	15.4	17.4	16.5	26.3	24.8	30.6	24.5	27.5	18.9
Ex-vessel Value ($Millions)	7.36	6.84	6.04	11.74	10.32	14.58	10.00	17.67	14.79
Pollock									
Number of Catcher Vessels	64	38	44	46	49	79	69	62	64
Retained Tons (Thousands)	52.8	51.5	52.1	49.2	46.2	43.9	47.6	36.3	32.2
Ex-vessel Value ($Millions)	12.85	7.97	8.60	9.84	8.13	9.90	6.76	7.29	7.75
All Groundfish Species									
Total Number of Catcher Vessels	172	130	143	145	144	160	153	158	192
Total Retained Tons (Thousands)	80.3	77.4	75.5	83.2	82.5	90.8	81.0	69.5	62.7
Total Ex-vessel Value ($Millions)	28.47	21.14	22.35	27.54	28.33	39.63	22.74	30.04	30.07

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include "ghost" entities, while weight information includes "ghost" entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-19 Retained harvests by FMP area and species of Kodiak regional catcher vessels

Year	FMP Area										Total
	Aleutian Islands		Bering Sea		Western Gulf		Central Gulf		Eastern Gulf		
	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	
Volume (Thousands of Tons)											
1992	0.43	0.13	6.15	23.58	6.14	0.75	9.94	20.91	0.10	0	68.14
1993	0.06	0.12	7.46	16.78	3.51	2.59	10.33	27.68	0.32	0.08	68.93
1994	0.02	0.1	7.87	13.45	3.01	2.81	9.55	30.18	0.24	1.46	68.69
1995	0.03	0.28	10.85	37.58	2.53	3.51	11.32	9.34	0.08	0.02	75.54
1996	0.28	0.12	13.80	34.04	3.53	3.73	8.74	6.70	0.08	0.04	71.05
1997	0.47	0.05	14.88	18.65	5.78	3.89	12.99	17.25	0.10	0.35	74.42
1998	0.90	0.04	7.87	22.09	4.27	4.02	10.05	22.63	0.09	0.17	72.11
1999	1.60	0.01	6.70	14.57	4.43	3.30	14.00	18.78	0.10	0.26	63.75
2000	1.87	0	6.30	11.95	3.41	3.02	10.34	13.45	0.10	0.68	51.12
Value ($Millions)											
1992	0.17	0.03	2.49	5.04	2.41	0.16	4.63	5.21	0.08	0	20.21
1993	0.02	0.02	2.42	2.28	1.17	0.33	3.95	4.42	0.19	0.01	14.81
1994	0.01	0.02	2.53	2.08	0.93	0.43	3.27	5.03	0.09	0.24	14.64
1995	0.01	0.06	4.25	7.84	1.02	0.66	5.53	2.16	0.04	0	21.58
1996	0.10	0.02	5.09	5.85	1.24	0.71	3.93	1.44	0.07	0.01	18.46
1997	0.26	0.01	6.53	4.17	2.26	0.92	6.17	4.01	0.08	0.07	24.48
1998	0.31	0.01	2.99	3.13	1.58	0.59	4.44	3.64	0.06	0.03	16.77
1999	0.94	0	3.87	3.05	2.43	0.75	9.69	4.11	0.07	0.06	24.97
2000	1.20	0	4.05	2.84	2.21	0.74	8.00	3.24	0.08	0.17	22.55

3.12.2.5 Southcentral Alaska Region

Overview. The AKSC spans the most heavily populated area of the state, and is shown in Figure 3.12-6. In AKSC, participation in the groundfish fishery varies considerably from other Alaska regions, and the region is little involved with the Bering Sea pollock fishery specifically. In 1999, the region accounted for 1.6 percent of the volume and 5.6 percent of the value of all groundfish processed in Alaska. While accounting for less than 1 percent of the pollock, 2 percent of the flatfish, and 5 percent of the Pacific cod processed inshore in Alaska regions over the period 1992-2000, AKSC did account for 19 percent of the ARSO species group. The region is also different by virtue of its connection of communities and ports by a road system. Homer and Seward serve as the primary ports for groundfish trucked on the Alaska road system. During 1991-1999, groundfish were processed in 11 regional communities, with Cordova, Nikiski and Seward accounting for the majority of processing. Steller Sea Lion protection measures may have already had significant effects on the groundfish (and especially pollock) fisheries which do exist in the region.

Click on the associated link in the left column to download the figure or table.

Population. At 374,975 persons in 1999, AKSC is the largest of the four Alaska regions, and it includes Anchorage (population 260,000), as well as small rural communities. Many fishing enterprises and organizations as well as government agencies have offices in Anchorage, and the community is the home of the North Pacific Fishery Management Council (NPFMC). AKSC groundfish communities tend to be largely non-Native. The high male-to-female ratio often present in small to moderate-sized communities with relatively large processing capacity (such as AKAPAI communities) is not present in this region. This circumstance reflects both a smaller scale of processing operations and a more resident workforce.

Employment and Income. The economies of AKSC groundfish communities tend to be more diversified than those of AKAPAI or AKKO. In part, this greater diversification is a function of road-connectedness and associated access to a large population base, as well as the presence of other developable resources. Groundfish are of lesser importance for employment and income to the region in absolute and relative terms than for either AKAPAI or AKKO. In comparison with the manufacturing sector, in 1999 ten sectors had greater employment and income (the service sector alone had 12 times the number of jobs and 8 times the income of manufacturing).

Tax and Revenue. None of the AKSC groundfish processing communities have a local or borough fish tax. At $1,521,569 in fiscal year 1999, 73.3 percent of the region's shared taxes and fees were fisheries-related. This is a higher amount than the Kodiak region received (although derived to a lesser extent from groundfish).

Inshore Processing. The groundfish processed in AKSC in 1999 accounted for less than two percent of the groundfish processed inshore in all Alaska regions. The ARSO species group accounted for 43 percent of the volume reported over the period 1991-1998, and Pacific cod, pollock, and flatfish accounted for 35, 17, and 5 percent of the total, respectively. Pollock landings were highly variable. The value per metric ton (more than $2,751 in 1999) for AKSC was four times higher than in AKAPAI. The total product value, $30 million, was approximately 12 times lower than in AKAPAI. The differences between the regions can be accounted for by dependence on relatively high-value, low-volume groundfish species. In 1999, ARSO accounted for 42 percent of the volume and 69 percent of the product value for all groundfish processed in the region, while Pacific cod accounted for 30 percent of volume and 21 percent of value. Pollock comprised 20 percent of the volume and 9 percent of value of regional processing, with flatfish accounting for 8 percent of volume and 1 percent of value. Furthermore, the ARSO species group varies internally among regions, with Atka mackerel (lower value) concentrated to the west, and rockfish (higher value) becoming more important to the east. Processing is also different in the aggregate, as shown by the much higher utilization rates in AKSC (more than 61 percent in 1999) compared to AKAPAI and AKKO (35 and 27 percent in 1999, respectively). In 2000, 17 regional plants reported processing groundfish in Anchorage (2), Cordova (3), Homer (5), Kenai (4), Ninilchik (1), and Seward (2).

Processor Ownership. Groundfish processor ownership by residents is concentrated in the AKSC shore plant sector, with secondary focus on head and gut trawl and longline catcher processor sectors. More processing entities are owned by AKSC residents than by residents of any other Alaska region. For these processors during 1991-1999, ARSO and flatfish far outdistanced Pacific cod in volume for most years. Although variable, Pacific cod, in turn, represented a higher-volume fishery year to year than pollock. In 1999, 24,000 tons with a wholesale value of $34 million were reported for regionally owned processors. Of the total value, $32 million came from shoreplants and $2 million from catcher-processors. There were no motherships owned by regional residents.

Catcher Vessel Ownership and Activity. More groundfish catcher vessels are owned by AKSC residents than by residents of either AKAPAI or AKKO. Fixed gear catcher vessels predominate, and since 1995, five or fewer trawl vessels have been locally owned. In the fixed gear vessel class, smaller vessel classes predominate by a large margin. This pattern is due, in part, to the relatively small scale of fisheries (and processing capacity) in AKSC, the diversified nature of the fisheries pursued, and the presence of relatively sheltered waters. Ownership of vessels is spread through numerous communities in the region, but Homer, Anchorage, Cordova, and Seward (in that order of importance) combined accounted for 63 percent of the total number of regionally owned vessels between 1992 and 2000, and these vessels, in turn, accounted for 73 percent of the ex-vessel value accrued by regionally owned vessels over this same period. Homer accounted for 26 percent of regional value and 32 percent of regional vessels, Anchorage for 19 percent of value and 14 percent of vessels, Cordova for 15 percent of value and 9 percent of vessels, and Seward for 13 percent of value and 8 percent of vessels, respectively. No other community accounted for more than 5 percent of value for regionally owned vessels, nor for more than 8 percent vessels themselves for the 1992-2000 period. Locally owned vessels harvested groundfish in all five Alaska FMP areas, but very little effort is directed at the AI, BS or EG areas (3 to 4 percent of value of total groundfish retained harvest for these vessels for each of these regions). In 1999, 79 percent of value came from the CG and 10 percent came from the WG. In 1999, for retained harvest, 65 percent of volume and 57 percent of value came from Pacific cod, while ARSO accounted for 10 percent of volume and 35 percent of value. Pollock, while comprising 23 percent of total groundfish volume only accounted for 6 percent of total value; flatfish was 2 percent of volume and 1 percent of value for that same year.

Harvest Diversity. In recent years, groundfish has accounted for roughly 25 percent of ex-vessel value for groundfish catcher vessels owned by AKSC residents. In 1998, halibut was the most important species, accounting for about one-third of total ex-vessel value. Groundfish and salmon account for roughly 25 percent and crab about 15 percent of the total ex-vessel value. Fully 75 percent of all groundfish vessels fished halibut, and 6 out of every 10 fished salmon (Groundfish SEIS, Appendix I).

Processing Diversity. Groundfish has accounted for roughly 10 to 35 percent of ex-vessel value at all AKSC inshore plants over the period from 1991 to 1998. In 1998, ex-vessel value was slightly less for groundfish than for halibut (29 and 31 percent, respectively), and quite a bit less important than for salmon (40 percent of ex-vessel value). Virtually no crab is processed at these plants (Groundfish SEIS, Appendix I).

Subsistence. Until May 2000, Homer, Kenai, and Seward were not classified as subsistence communities. Older data suggest that residents of Homer and Kenai consumed between 84 and 94 pounds of subsistence resources per capita per year and zero or less than one pound of subsistence groundfish. No information exists for Seward. Anchorage is not classified as a subsistence community. For Cordova, groundfish are reported as approximately 4 percent (7 pounds per capita) of the total subsistence consumption (179 pounds per person per year). Subsistence use of Steller sea lions in the region is not well documented, but has historically been important for the community of Tatitlek. No other Southcentral community is noted to have a regular pattern of harvest for Steller sea lions (see Appendix F(3)).

Tables 3.12-20 through 3.12-25 summarize information on the AKSC regional engagement with the groundfish fishery through 2000.

Table 3.12-20 North Pacific Groundfish Fishery Participation Measures for the Southcentral Alaska Region, 1992-2000

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Processor Employment and Payments to Labor									
Employment (Est. FTEs)	159	150	135	195	156	260	240	170	148
Payment to Labor ($Millions)	11.9	13.1	12.2	17.1	14.5	16.8	13.1	13.5	14.5
Groundfish Processing by Regional Inshore Plants									
Reported Tons (Thousands)	12.86	12.88	11.97	12.82	12.65	16.9	17.69	10.82	10.01
Product (Thousands of Tons)	6.6	6.62	5.31	7.05	6.86	9.2	9.7	6.64	5.23
Utilization Rate (Percent)	0.51	0.51	0.44	0.55	0.54	0.54	0.55	0.61	0.52
Product Value ($Millions)	25.68	31.26	28.78	39.91	34.91	40.28	31.68	29.77	32.21
Value per Ton ($)	1997	2427	2404	3113	2760	2383	1791	2751	3218
Processors Owned by Regional Residents									
Number of Processors Owned	19	16	19	19	14	19	15	13	16
Reported Tons (Thousands)	19.46	21.03	19.76	22.55	19.96	26.70	24.15	24.40	23.13
Wholesale Value ($Millions)	23.79	27.77	25.94	35.47	27.80	32.49	24.47	33.59	35.43
Catcher Vessels Owned by Regional Residents									
Number of Catcher Vessels	340	288	303	237	191	197	171	170	198
Retained Tons (Thousands)	32.5	20.6	19.7	18.4	11.3	11.8	11.4	12.4	15.5
Exvessel Value ($Millions)	17.22	12.21	11.17	12.33	9.17	11.21	7.47	10.31	13.75
Employment (Persons)	1672	1,315	1,432	1,148	984	1,001	813	820	933
Payment to Labor ($Millions)	6.89	4.89	4.47	4.93	3.67	4.48	2.99	4.12	5.5

1) Includes all employment at all shoreplants located in the region and all employment of at-sea processors (including floaters) owned by residents. In addition the estimate includes administrative employment of all processors owned by residents. 2) All payments to labor from at-sea processors (including floaters) are assigned to the owners region. On-site payments to labor from shore plants are assigned to the region in which the plant is located.
Source: For processing information, NMFS Blend Data and WPR Data, June 2001 and Northern Economics (1994) internally derived tables. For harvest information, ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include "ghost" entities, while weight information includes "ghost" entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-21 Groundfish reported by Southcentral Alaska region inshore plants by species group

	Species Group				
Groundfish Reported	ARSO	Flatfish	Pacific Cod	Pollock	Total
1999 Tons (Thousands)	4.58	0.87	3.34	2.03	10.82
1999 Product Value ($Millions)	20.61	0.21	6.13	2.81	29.77
2000 Tons (Thousands)	5.44	0.4	2.25	1.92	10.01
2000 Product Value ($Millions)	26.01	0.21	3.85	2.13	32.21

Source: NMFS Blend Data and WPR Data, June 2001.

Table 3.12-22 Groundfish wholesale value of processor class owned by residents of the Southcentral Alaska region, 1992-2000

Processor Class	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
Catcher-Processors	3.29	2.87	2.22	2.19	2.2	2.41	1.75	2.04	2.13
Motherships	0	0	0	0	0	0	0	0	0
Shoreplants	20.50	24.9	23.73	33.28	25.60	30.08	22.72	31.56	33.3

Note: Value - $Millions.
Source: Derived tables, Northern Economics (1994), adapted from NMFS Blend Data and WPR Data, June 2001.

Table 3.12-23 Groundfish retained harvest ex-vessel value, catcher vessels owned by Southcentral Alaska region residents by FMP subarea, 1999-2000

Retained Harvest	FMP Subarea					
	AI	BS	WG	CG	EG	Total
1999 Ex-vessel ($Millions)	0.34	0.36	1.01	8.19	0.40	10.31
2000 Ex-vessel ($Millions)	0.77	0.61	1.83	9.72	0.83	13.75

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001.

Table 3.12-24 Number of boats and retained catch by weight and value, by species group, and by catcher vessel ownership for the Southcentral Alaska region

Data	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
ARSO									
Number of Catcher Vessels	299	269	290	207	169	175	145	129	141
Retained Tons (Thousands)	3.5	3.5	2.8	2.0	1.5	1.6	1.2	1.3	1.8
Ex-vessel Value ($Millions)	8.14	7.55	7.31	6.91	4.94	6.28	3.47	3.71	5.28
Flatfish									
Number of Catcher Vessels	16	12	6	7	16	12	17	7	11
Retained Tons (Thousands)	0.5	0.4	0.8	0.1	0.2	0.1	0.2	0.2	1.0
Ex-vessel Value ($Millions)	0.16	0.13	0.16	0.04	0.11	0.12	0.10	0.09	0.20
Pacific Cod									
Number of Catcher Vessels	279	162	116	172	139	160	145	151	174
Retained Tons (Thousands)	9.9	6.6	5.0	7.4	7.6	8.8	8.0	8.1	9.1
Ex-vessel Value ($Millions)	4.92	2.98	1.81	3.70	3.73	4.51	3.62	5.91	7.34
Pollock									
Number of Catcher Vessels	25	16	6	7	15	30	23	31	41
Retained Tons (Thousands)	18.6	10.2	11.1	8.8	2.1	1.3	2.0	2.8	3.6
Ex-vessel Value ($Millions)	4	1.56	1.89	1.68	0.39	0.29	0.28	0.60	0.92
All Groundfish Species									
Total Number of Catcher Vessels	340	288	303	237	191	197	171	170	198
Total Retained Tons (Thousands)	32.5	20.6	19.7	18.4	11.3	11.8	11.4	12.4	15.5
Total Ex-vessel Value ($Millions)	17.22	12.21	11.17	12.33	9.17	11.21	7.47	10.31	13.75

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include “ghost” entities, while weight information includes “ghost” entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-25 Retained harvests by FMP area and species of Southcentral Alaska regional catcher vessels

Year	FMP Area										Total
	Aleutian Islands		Bering Sea		Western Gulf		Central Gulf		Eastern Gulf		
	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	
Volume (Thousands of Tons)											
1992	0.04	0.30	2.25	17.29	1.20	0.44	5.58	1.16	0.18	0	28.44
1993	0.05	0.11	1.16	6.80	1.12	0.49	4.95	1.68	0.39	0	16.74
1994	0.02	0.11	2.12	7.22	0.85	0.48	3.94	1.13	0.20	0.06	16.12
1995	0.01	0.06	3.49	5.30	0.59	0.31	5.63	0.83	0.05	0	16.28
1996	0.01	0	2.96	0.13	1.09	0.47	4.14	0.73	0.09	0	9.62
1997	0.11	0.01	2.29	2.70	0.94	0.18	3.07	0.69	0.06	0.03	10.10
1998	0.01	0	1.25	0.05	1.24	0.21	4.94	2.22	0.08	0.02	10.02
1999	0.38	0	1.48	0.71	0.94	0.29	5.28	1.70	0.06	0.03	10.87
2000	0.57	0	2.10	0.57	1.27	0.33	5.87	1.83	0.07	0.09	12.70
Value ($Millions)											
1992	0.02	0.08	1.04	3.87	0.54	0.11	2.83	0.29	0.14	0	8.93
1993	0.02	0.02	0.46	0.92	0.40	0.06	2.13	0.26	0.26	0	4.53
1994	0.01	0.02	0.72	1.01	0.25	0.07	1.37	0.17	0.08	0.01	3.71
1995	0	0.01	1.37	0.97	0.22	0.05	2.56	0.17	0.03	0	5.38
1996	0.01	0	1.24	0.02	0.41	0.09	2.09	0.16	0.09	0	4.12
1997	0.1	0	1.57	0.64	0.46	0.05	1.73	0.18	0.06	0.01	4.80
1998	0	0	0.54	0.01	0.49	0.03	2.40	0.36	0.06	0	3.90
1999	0.25	0	0.96	0.16	0.58	0.07	4.04	0.40	0.05	0.01	6.51
2000	0.36	0	1.39	0.14	0.84	0.08	4.91	0.46	0.06	0.02	8.26

3.12.2.6 Southeast Alaska Region

Overview. AKSE encompasses a wide range of communities from Yakutat to Ketchikan and Prince of Wales Island and is shown in Figure 3.12-7. In 1999, AKSE accounted for only 0.7 percent by volume and 5.1 percent by value of the groundfish landed and processed in Alaska. In this regard it is much more similar to AKSC than to AKKO or AKAPAI. For the period 1992-2000, regional processors accounted for 21 percent of the ARSO ("other groundfish") species category, but 1 percent or less for flatfish, Pacific cod, pollock, and groundfish taken as a whole. The top three AKSE ports account for almost all of the region's reported processing. In alphabetical order, they are Petersburg, Sitka, and Yakutat. All three communities support diverse fisheries, pursued by fishers participating in multiple fisheries. Of most importance are salmon and halibut. The main groundfish fisheries are rockfish and sablefish.

Click on the associated link in the left column to download the figure or table.

Population. In 1999, the region had a total population of 72,525. There is no clear common regional dynamic of community growth in AKSE. Petersburg, Yakutat, and Sitka all display different patterns. Southeast Alaska is ethnically mixed, but communities differ markedly in this matter. Furthermore, ethnic diversity is more limited in AKSE than in the other Alaska regions considered in this document. The main groups present are Caucasians and Alaska Natives, with other groups present only in relatively small percentages. In Sitka and Petersburg, Caucasians are the great majority of the population (74 and 87 percent respectively), with Alaska Natives at 21 and 10 percent, respectively. Yakutat is 55 percent Native and 43 percent Caucasian. This overall population composition reflects the general identity or 'character' of each community, as Petersburg highlights its Norwegian fishing history, Sitka its diverse Native/Russian-American history, and Yakutat its Native heritage. Males outnumber females, but no community shows the great differences that are present in the four large groundfish ports of AKAPAI.

Employment and Income. Fisheries in general, and groundfish fisheries in particular, are relatively small contributors to AKSE employment, especially compared to the government, services, and retail sectors. For the three communities of most concern, fishing and fish processing are more important in absolute terms than the 'average' regional community. Still, the groundfish fishery does not provide a large base for regional employment. There are fewer overall economic opportunities in Yakutat compared to the other two communities.

Tax and Revenue. In contrast to some Alaska groundfish communities in other regions, revenues directly resulting from local landings or processing of groundfish are not the basis for local taxation in AKSE. Only Yakutat has a local fish tax, and it applies to salmon rather than to fish in general (and thus does not apply to groundfish). Shared state fisheries taxes do generate revenue for local communities, however. The region's share of the fisheries business tax and fishery resource landing tax amounted to $2,221,926 in 1999, which was 88 percent of such shared revenue for the region.

Inshore Processing. Most AKSE regional groundfish processing occurs in Petersburg, Sitka, and Yakutat. These communities differ in the degree to which they participate in groundfish fisheries and in the mix of species that they exploit. Of greatest significance, both regionally and for the groundfish fishery as a whole, is ARSO, the mixed category that lumps Atka mackerel, rockfish, sablefish, and other groundfish. Most of the active processors in this region use groundfish only as a supplementary product acquired as bycatch. Rockfish are targeted only sometimes as a primary product, and total volume is still low. The groundfish fishery is important for components of the local fleet, but serves a secondary role for most processors. Southeast Alaska processing plants extract a large return from the fish that they process, with a relatively high utilization rate, compared to AKKO and AKAPAI. At 74 percent in 1999, utilization was over twice that of AKAPAI. At a value per ton of $5,665, this more than 8 times as great as the AKAPAI region and more than twice the value of AKSC, the next closest region. For the most part, regional processors tend to concentrate on higher-value, low-volume species such as sablefish and rockfish that are typically sold whole or as headed and gutted product. In 1999, ARSO accounted for 92 percent of the volume and 99 percent of the value of the groundfish processed in the region. Pacific cod accounted for 2 percent of the volume and 1 percent of the value of the groundfish processed in the region; flatfish accounted for the virtual remainder of the regional volume (5 percent), but its value was negligible on a regional basis. In 2000, 13 regional plants reporting groundfish processing operated in Hoonah (1), Juneau (2), Ketchikan (2), Petersburg (2), Pelican (1), Sitka (3), and Yakutat (2).

Processing Ownership. Groundfish processing capacity in AKSE owned by residents of the region is concentrated in two sectors, inshore processing plants and longline catcher processors. A significant percentage (half or more) of regional onshore processing capacity is owned by residents of other areas. It appears that regional pollock and flatfish processing is concentrated primarily in non-locally owned onshore facilities. For regionally owned facilities, groundfish of greatest importance are Pacific cod and the ARSO category (mainly sablefish and rockfish). In 1999, catcher-processor wholesale product value was $11.0 million, while shoreplant wholesale product value was $7.2 million. No motherships were owned by regional residents.

Catcher Vessel Ownership and Activity. Ownership patterns for catcher vessels are much the same as for processors in that they indicate a fishery more dependent on limited quantities of Pacific cod, rockfish, and sablefish pursued with longline gear rather than higher volumes of fish pursued with trawl gear. Most locally owned vessels are relatively small and use longline gear for groundfish (and probably participate in other fisheries). Sitka, Petersburg, Juneau, and Ketchikan are the most important communities in terms of regional vessel ownership. Over the 1992-2000 period, Sitka vessels accounted for 30 percent of the value of the groundfish landed by the regionally owned fleet, and for 29 percent of the vessels in that fleet. Petersburg residents accounted for 17 percent of the value and 16 percent of the regionally owned fleet, while Juneau residents owned 13 percent of both value and vessels during this period. Ketchikan resident-owned vessels accounted for 7 percent of the ex-vessel value of landings by regionally owned vessels during 1992-2000, and 7 percent of the regionally owned fleet. No other community accounted for more than 4 percent of the regional total for either value or vessels. In 1999, 71 percent of the harvest value came from the Eastern Gulf, 23 percent from the Central Gulf, and 4 percent from the Western Gulf. Approximately 1 percent came from the Bering Sea and the Aleutian Island areas. It is likely that regionally owned vessels harvest and deliver nearly all fish in the ARSO category. In 1999, ARSO accounted for 68 percent of the volume and 93 percent of the value of the harvest, while Pacific cod represented 30 percent of the volume of the total groundfish harvest and 6 percent of the value. This local fleet is a multi-species, multi-gear fleet concentrated in Sitka and Petersburg. For groundfish, the fleet targets sablefish and rockfish. Thus, most of the Pacific cod and pollock processed by the region's shore plants is harvested and delivered by non-local vessels.

Harvest Diversity. In terms of the fishing annual round, groundfish and non-groundfish species tend to complement each other. The importance of groundfish as a proportion of total ex-vessel value has remained relatively stable, between 30 and 40 percent in recent years. Halibut and salmon each contribute about 25 percent each of the total ex-vessel value. The fleet is relatively diversified, with more than 80 percent of groundfish catcher vessels owned by AKSE residents participating in the halibut fishery, and about 70 percent of groundfish vessels participating in the salmon fishery. Twenty-five percent of the vessels also fish for crab. About 60 percent participate in fisheries other than halibut, salmon, and crab (Groundfish SEIS, Appendix I).

Processing Diversity. Groundfish has accounted for roughly 20 to 30 percent of ex-vessel value at regional processing facilities over the period from 1991 to 1998, with a gradual increase in value. Groundfish accounts for roughly 29 percent of the value of total plant production, compared to 40 percent for salmon and 20 percent for halibut (Groundfish SEIS, Appendix I).

Subsistence. Subsistence utilization in the regionally important groundfish communities of Petersburg, Sitka, and Yakutat ranges between about 200 and 400 pounds per capita. Groundfish represents 1 to 5 percent of the total subsistence resources consumed. No community in the Southeast region is noted to have a regular pattern of harvest for Steller sea lions.

Tables 3.12-26 through 3.12-31 summarize information on the AKSE regional engagement with the groundfish fishery through 2000.

Table 3.12-26 North Pacific groundfish fishery participation measures for Southeast Alaska region, 1992-2000

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Processor Employment and Payments to Labor									
Employment (Est. FTEs)	128	114	117	93	93	94	121	112	125
Payment to Labor ($Millions)	10.2	11.1	14.9	13.8	14.6	14.2	12.2	12.6	15.7
Groundfish Processing by Regional Inshore Plants									
Reported Tons (Thousands)	7.43	8.28	9.53	6.25	5.63	4.8	5.48	4.75	5.84
Product (Thousands of Tons)	4.96	5.36	6.4	4.68	4.48	4.22	4.31	3.51	4.16
Utilization Rate (Percent)	0.67	0.65	0.67	0.75	0.8	0.88	0.79	0.74	0.71
Product Value ($Millions)	27.22	30.51	42.01	40.65	38.56	37.16	38.83	26.91	32.08
Value per Ton ($)	3664	3685	4408	6504	6849	7742	7086	5665	5493
Processors Owned by Regional Residents									
Number of Processors Owned	9	9	11	8	13	11	11	10	10
Reported Tons (Thousands)	8.27	8.96	10.18	7.52	9.38	10.66	9.93	11.14	14.37
Wholesale Value ($Millions)	6.82	8.09	11.27	7.56	15.50	17.64	15.45	18.12	24.91
Catcher Vessels Owned by Regional Residents									
Number of Catcher Vessels	403	356	367	293	283	269	238	235	228
Retained Tons (Thousands)	9.4	9.5	8.9	7.4	7.0	6.6	6.1	6.3	6.5
Ex-vessel Value ($Millions)	19.87	19.24	26.44	26.65	25.29	24.42	16.32	17.67	23.51
Employment (Persons)	1951	1,796	1,801	1,608	1,589	1,508	1,303	1,328	1,238
Payment to Labor ($Millions)	7.95	7.70	10.58	10.66	10.12	9.77	6.53	7.07	9.4

Note: 1) Includes all employment at all shoreplants located in the region and all employment of at-sea processors (including floaters) owned by residents. In addition the estimate includes administrative employment of all processors owned by residents. 2) All payments to labor from at-sea processors (including floaters) are assigned to the owners region. On-site payments to labor from shore plants are assigned to the region in which the plant is located.
Source: For processing information, NMFS Blend Data and WPR Data, June 2001 and Northern Economics (1994) internally derived tables. For harvest information, ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include “ghost” entities, while weight information includes “ghost” entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-27 Groundfish reported by Southeast Alaska region inshore plants by species group

Groundfish Reported	Species Group				
	ARSO	Flatfish	Pacific Cod	Pollock	Total
1999 Tons (Thousands)	4.38	0.25	0.12	0	4.75
1999 Product Value ($Millions)	26.72	0	0.19	0	26.91
2000 Tons (Thousands)	5.47	0.31	0.06	0	5.84
2000 Product Value ($Millions)	31.94	0	0.14	0	32.08

Source: NMFS Blend Data and WPR Data, June 2001.

Table 3.12-28 Groundfish wholesale value of processor class owned by residents of the Southeast Alaska region, 1992-2000

Processor Class	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
Catcher-Processors	5.85	6.43	6.77	4.79	6.68	5.65	7.10	10.96	13.58
Motherships	0	0	0	0	0	0	0	0	0
Shoreplants	0.97	1.67	4.50	2.78	8.82	11.99	8.36	7.16	11.33

Notes: Value - $Millions.
Source: Derived tables, Northern Economics (1994) adapted from NMFS Blend Data and WPR Data, June 2001.

Table 3.12-29 Groundfish retained harvest ex-vessel value, catcher vessels owned by Southeast Alaska region residents by FMP subarea, 1999-2000

Retained Harvest	FMP Subarea					
	AI	BS	WG	CG	EG	Total
1999 Ex-vessel ($Millions)	0.15	0.16	0.70	4.07	12.59	17.67
2000 Ex-vessel ($Millions)	0.4	0.56	0.56	5.08	16.91	23.51

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001

Table 3.12-30 Number of boats and retained catch by weight and value, by species group, and by catcher vessel ownership for the Southeast Alaska region

Data	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
ARSO									
Number of Catcher Vessels	400	350	362	287	278	265	235	229	224
Retained Tons (Thousands)	7.5	8.2	8.1	6.5	5.7	4.9	4.8	4.3	4.7
Ex-vessel Value ($Millions)	18.93	18.57	26.13	26.22	24.53	23.53	15.73	16.48	22.27
Flatfish									
Number of Catcher Vessels	12	6	6	12	13	9	8	13	11
Retained Tons (Thousands)	0	0.1	0	0	0	0	0.1	0.1	0
Ex-vessel Value ($Millions)	0.01	0.06	0	0	0.02	0.01	0.04	0.03	0.02
Pacific Cod									
Number of Catcher Vessels	137	115	72	88	106	107	93	107	95
Retained Tons (Thousands)	1.9	1.2	0.7	0.9	1.2	1.6	1.2	1.9	1.6
Ex-vessel Value ($Millions)	0.93	0.62	0.31	0.43	0.73	0.88	0.54	1.15	1.18
Pollock									
Number of Catcher Vessels	5	7	2	6	9	15	10	13	7
Retained Tons (Thousands)	0	0	*	0	0	0	0.1	0	0.2
Ex-vessel Value ($Millions)	0	0	0	0	0.01	0.01	0.01	0.01	0.04
All Groundfish Species									
Total Number of Catcher Vessels	403	356	367	293	283	269	238	235	228
Total Retained Tons (Thousands)	9.4	9.5	8.9	7.4	7.0	6.6	6.1	6.3	6.5
Total Ex-vessel Value ($Millions)	19.87	19.24	26.44	26.65	25.29	24.42	16.32	17.67	23.51

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include “ghost” entities, while weight information includes “ghost” entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-31 Retained harvests by FMP area and species of Southeast Alaska regional catcher vessels

Year	FMP Area										Total
	Aleutian Islands		Bering Sea		Western Gulf		Central Gulf		Eastern Gulf		
	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	
Volume (Thousands of Tons)											
1992	0.01	0	0.07	0.01	0.32	0.01	1.38	0.04	0.06	0	1.90
1993	0	0	0.02	0	0.21	0.07	0.79	0.05	0.06	0	1.20
1994	0	0	0.07	0	0.09	0.03	0.44	0.04	0.02	0	0.70
1995	0	0	0.09	0	0.08	0.05	0.60	0.02	0.01	0	0.85
1996	0	0	0.04	0.01	0.22	0.10	0.87	0.03	0.03	0	1.29
1997	0.02	0	0.40	0	0.28	0.04	0.81	0.06	0.02	0	1.63
1998	0	0	0.01	0	0.27	0.06	0.75	0.10	0.01	0	1.21
1999	0.06	0	0.07	0.06	0.37	0.13	1.18	0.04	0.02	0	1.94
2000	0.08	0	0.11	0.06	0.41	0.17	0.95	0.02	0.02	0	1.79
Value ($Millions)											
1992	0	0	0.05	0	0.14	0	0.68	0.01	0.05	0	0.93
1993	0	0	0.02	0	0.09	0.01	0.43	0.01	0.06	0	0.62
1994	0	0	0.04	0	0.04	0.01	0.21	0.01	0.01	0	0.31
1995	0	0	0.05	0	0.03	0.01	0.33	0.01	0.01	0	0.43
1996	0	0	0.03	0	0.10	0.02	0.54	0.01	0.03	0	0.74
1997	0.02	0	0.29	0	0.12	0.01	0.42	0.01	0.02	0	0.88
1998	0	0	0.01	0	0.11	0.01	0.39	0.02	0.01	0	0.55
1999	0.03	0	0.04	0.01	0.20	0.03	0.83	0.01	0.01	0	1.16
2000	0.04	0	0.07	0.01	0.26	0.04	0.78	0	0.01	0	1.22

3.12.2.7 Washington Inland Waters Region

Overview. The WAIW region spans a good portion of northwestern Washington, as illustrated in Figure 3.12-8. The WAIW region as a whole, and especially the greater Seattle area in particular, is engaged in all aspects of the overall North Pacific groundfish fishery, and is particularly heavily involved in the Bering Sea pollock fishery. While this region is distant from the harvest areas, it is the organizational center of much of the industrial activity that comprises the human components of the fishery. More accurately, specific industry sectors based in or linked to Seattle are substantially engaged in or dependent on the North Pacific groundfish fishery. The scale and diversity of the WAIW makes a socioeconomic assessment directly related to the Alaska groundfish fishery very complex. Seattle's relationship to the Alaska groundfish fishery in general (and the Bering Sea pollock fishery in particular) is paradoxical. When examined from certain perspectives, Seattle is arguably more involved in the Alaska groundfish fishery than any other community. One example is the large absolute number of Seattle jobs in the Alaska groundfish fishery compared to all other communities, whether counted in terms of current residence, community of origin, or community of original hire (setting aside the matter of where the jobs are actually located). On the other hand, when examined from a comparative and relativistic perspective, it could be argued that the fishery is less important or vital for Seattle than for the other communities considered. Using the same example, the total number of Alaska groundfish-fishery-related jobs in greater Seattle compared to the overall number of jobs in Seattle is quite small, in contrast with the same type of comparison for the much smaller Alaska coastal communities. As extended community profile of Seattle is provided in Appendix F(1).

Click on the associated link in the left column to download the figure or table.

Regional Economy. As expected of a region encompassing a large metropolitan area and containing 3.8 million residents, retail trade and services are extremely important economic sectors and are the two largest in employment. Manufacturing employs more people than the state and local government sector, followed by finance, construction, wholesale trade, and transportation. The military, civilian federal, agricultural, and mining sectors are relatively small. The fishing industry has a significant presence in parts of WAIW, but is greatly overshadowed in terms of employment by other industry sectors. During the period 1992-1999, between 1,687 and 2,620 WAIW region residents were employed annually by Alaska groundfish processing sectors. At-sea processor sectors (motherships, trawl catcher processors, and longline catcher processors) are by far the most significant contributors. Due to the methodology employed, in which all employment for these entities accrues to the region of the residence of the owner, regional employment attributable to these sectors is probably overstated in absolute terms. On the other hand, many entities in these sectors have various business relationships with Alaska CDQ groups, and have special arrangements to foster Alaska, and especially Native Alaska, hire. Furthermore, shoreplant employment for WAIW residents may be understated, because all such employment except for head office staff is attributed to the region where the plant is located. Payments to labor for processing employment ranged between $183 million and $323 million during this same period.

Processing Ownership. Ownership of Alaska groundfish processing capacity is highly concentrated among owners with residence in the WAIW region. This concentration applies to both shoreplants and catcher processors, and varies in degree between sectors. In 1999, WAIW-owned processors reported processing 1.5 million tons of groundfish (96 percent of all Alaskan groundfish processed in 1999). Of this total, 71 percent was pollock, 13 percent was Pacific cod, 9 percent was flatfish, and 7 percent was ARSO. In terms of estimated wholesale value, WAIW-owned processors processed $1.1 billion worth of groundfish in 1999 (94 percent of the total). Of this value, 64 percent came from pollock, 21 percent from Pacific cod, 9 percent from ARSO, and 5 percent from ARSO. In 1999, wholesale product value from catcher-processors owned by regional residents was $571.1 million, from shoreplants was $490.8 million, and from motherships was $58.0 million.

Catcher Vessel Ownership. Residents of WAIW own catcher vessels in each vessel class that participates in the Alaska groundfish fishery. Numbers in all categories except the smaller vessels (fixed gear vessels less than 60 feet [and especially those less than 32 feet] and trawl vessels less than 60 feet) are significant relative to ownership levels in the Alaska regions. Catcher vessels owned by residents of WAIW tend to be larger than those owned by residents of Alaska, and this comparison emphasizes the region's concentration of ownership (and participation) in the BSAI groundfish fisheries. This is especially true for trawl vessels in general and large, AFA-eligible trawlers in particular. Catcher vessel ownership in this region is strongly concentrated in Seattle. During the 1992-2000 period, Seattle residents owned 45 percent of all regionally owned vessels, and these vessels, in turn, accounted for 65 percent of the total regionally owned vessel value of landings. Outside of Seattle, regional vessel ownership is widely dispersed. Residents of no other community accounted for more than 7 percent of the regionally owned vessels, or more than 5 percent of the regionally owned vessel landings value during this period, and a total of 70 communities have some own at least one or more vessels in this fleet. Catcher vessels owned by WAIW residents accounted for 1,258 employees in 1999, with payments to labor of $56 million. Harvest retained by these vessels is heavily concentrated in the Bering Sea FMP area. In 1999, 76 percent of retained harvest ex-vessel value came from the Bering Sea, 10 percent from the Central Gulf, 5 percent each from the Eastern and Western Gulf, and 4 percent from the Aleutian Islands. In terms of volume of retained harvest, in 1999, 91 percent was pollock, 7 percent Pacific cod, and 1 percent each of ARSO and flatfish. In terms of value, 72 percent derived from pollock, 16 percent from Pacific cod, and 12 percent from ARSO for the same year. Flatfish value was negligible. In the region, 43 percent of the vessels representing 67 percent of the volume and 62 percent of

the value of the harvest are located in Seattle. No other community in WAIW has residents with ownership of more than 6 percent of the region's vessels or 10 percent of the region's total volume or value of harvest.

Catcher Vessel Diversity. While Alaska groundfish make up the greater part of the ex-vessel value of the harvest by Alaska groundfish catcher vessels owned by WAIW residents, other fisheries are seasonally important. Although harvest volumes and values vary, over the period 1988-1998, groundfish has amounted to about 60 percent of the ex-vessel value of the harvest for these vessels. In 1998 specifically, groundfish comprised 57 percent of the ex-vessel value of the annual harvest round. About 27 percent was from crab, 11 percent from halibut, and 5 percent from salmon. Among regionally owned Alaska groundfish vessels, 47 percent also fished for halibut, about 28 percent also fished for crab, about 28 percent also fished for salmon, and about 27 percent also fished for other species in Alaska FMP areas (Groundfish SEIS, Appendix I).

Tables 3.12-32 through 3.12-37 summarize information on the WAIW regional engagement with the groundfish fishery through 2000.

Table 3.12-32 North Pacific groundfish fishery participation measures for Washington inland waters region, 1992-2000

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Processor Employment and Payments to Labor									
Employment (Est. FTEs)	4928	4,935	4,556	5,385	5,973	4,788	4,780	3,718	3,949
Payment to Labor ($Millions)	322.6	227.1	246.0	304.2	276.0	261.3	231.9	245.8	282.9
Groundfish Processing by Regional Inshore Plants									
Reported Tons (Thousands)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Product (Thousands of Tons)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Utilization Rate (Percent)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Product Value ($Millions)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Value per Ton ($)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Processors Owned by Regional Residents									
Number of Processors Owned	156	142	142	147	138	126	119	109	118
Reported Tons (Thousands)	2135	1,993	2,051	2.046	1,958	1,943	1,766	1,553	1,714
Wholesale Value ($Millions)	1325	897.7	1,030	1,305	1,149	1,113	979.2	1,120	1,284
Catcher Vessels Owned by Regional Residents									
Number of Catcher Vessels	273	220	245	253	234	252	236	262	271
Retained Tons (Thousands)	551.8	522.0	545.4	559.9	551.5	706.9	555.0	547.1	609.7
Ex-vessel Value ($Millions)	152.6	90.53	106.6	147.9	127.3	212.3	99.70	140.0	188.0
Employment (Persons)	1,312	1,029	1,129	1,240	1,134	1,253	1,130	1,258	1,311
Payment to Labor ($Millions)	61.02	36.21	42.64	59.17	50.91	84.92	39.88	55.99	75.18

Notes: 1) Includes all employment at all shoreplants located in the region and all employment of at-sea processors (including floaters) owned by residents. In addition the estimate includes administrative employment of all processors owned by residents. 2) All payments to labor from at-sea processors (including floaters) are assigned to the owners region. On-site payments to labor from shore plants are assigned to the region in which the plant is located.
Source: For processing information, NMFS Blend Data and WPR Data, June 2001 and Northern Economics (1994) internally derived tables. For harvest information, ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include "ghost" entities, while weight information includes "ghost" entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-33 Groundfish reported by Washington inland waters region inshore plants by species group

Groundfish Reported	Species Group				
	ARSO	Flatfish	Pacific Cod	Pollock	Total
1999 Tons (Thousands)	NA	NA	NA	NA	NA
1999 Product Value ($Millions)	NA	NA	NA	NA	NA
2000 Tons (Thousands)	NA	NA	NA	NA	NA
2000 Product Value ($Millions)	NA	NA	NA	NA	NA

Source: NMFS Blend Data and WPR Data, June 2001.

Table 3.12-34 Groundfish wholesale value of processor class owned by residents of the Washington inland waters region, 1992-2000

Processor Class	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
Catcher-Processors	769.55	545.92	584.92	708.70	638.37	598.18	532.11	571.07	637.79
Motherships	92.12	44.06	53.56	74.46	66.52	71.58	58.17	57.92	81.25
Shoreplants	463.51	308.01	391.97	522.23	444.44	443.68	388.96	490.81	564.61

Note: Value - $Millions.
Source: Derived tables, Northern Economics (1994), adapted from NMFS Blend Data and WPR Data, June 2001.

Table 3.12-35 Groundfish retained harvest ex-vessel value, catcher vessels owned by Washington inland waters region residents by FMP subarea, 1999-2000

Retained Harvest	FMP Subarea					
	AI	BS	WG	CG	EG	Total
1999 Ex-vessel ($Millions)	4.98	106.18	7.69	13.76	7.36	139.97
2000 Ex-vessel ($Millions)	7.19	151.81	7.71	11.66	9.59	187.96

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001

Table 3.12-36 Number of boats and retained catch by weight and value, by species group, and by catcher vessel ownership for the Washington inland waters region

Data	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
ARSO									
Number of Catcher Vessels	207	178	210	178	185	199	204	205	204
Retained Tons (Thousands)	7.2	4.5	4.7	7.6	6.1	6.3	5.9	6.1	5.7
Ex-vessel Value ($Millions)	15.87	9.76	14.08	28.57	23.72	25.75	15.71	16.58	21.57
Flatfish									
No. of Catcher Vessels	85	80	85	109	103	104	105	104	123
Retained Tons (Thousands)	15.2	1.9	10.2	15.4	8.6	27.6	2.6	3.4	4.8
Ex-vessel Value ($Millions)	5.11	0.71	2.30	3.22	1.42	7.79	0.44	0.50	0.77
Pacific Cod									
Number of Catcher Vessels	164	123	115	167	146	161	153	191	206
Retained Tons (Thousands)	36.3	30.5	40.2	48.5	60.8	74.9	38.7	40.8	47.4
Ex-vessel Value ($Millions)	13.77	9.72	11.48	17.48	20.87	34.08	12.63	21.82	30.56
Pollock									
Number of Catcher Vessels	97	76	78	94	93	103	100	109	129
Retained Tons (Thousands)	493.2	485.2	490.3	488.4	475.9	598.1	507.8	496.9	551.7
Ex-vessel Value ($Millions)	117.79	70.33	78.74	98.67	81.27	144.67	70.93	101.07	135.06
All Groundfish Species									
Total Number of Catcher Vessels	273	220	245	253	234	252	236	262	271
Total Retained Tons (Thousands)	551.8	522.0	545.4	559.9	551.5	706.9	555.0	547.1	609.7
Total Ex-vessel Value ($Millions)	152.55	90.53	106.60	147.91	127.28	212.28	99.70	139.97	188

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include “ghost” entities, while weight information includes “ghost” entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-37 Retained harvests by FMP area and species of Washington inland wasters regional catcher vessels

Year	FMP Area										Total
	Aleutian Islands		Bering Sea		Western Gulf		Central Gulf		Eastern Gulf		
	Pacific cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	
Volume (Thousands of Tons)											
1992	0.24	16.71	16.83	446.92	8.13	10.99	9.29	20.33	0.05	0	529.48
1993	1.4	15.42	17.27	441.48	3.72	11.38	6.23	18.11	0.19	0.49	515.69
1994	0.03	17.93	28.98	436.35	2.83	12.49	6.12	21.46	0.16	4.12	530.49
1995	0.26	18.56	34.18	437.37	5.84	17.44	9.83	13.05	0.03	0.31	536.87
1996	2.69	10.13	43.26	449.30	4.02	10.77	9.54	6.62	0.04	0.36	536.72
1997	4.9	12.89	47.70	561.91	7.13	13.47	8.86	12.88	0.04	3.24	673
1998	3.23	7.53	23.21	454.88	4.98	14.62	8.82	23.46	0.04	5.75	546.52
1999	5.49	0.01	21.61	462.51	5.91	10.83	10.13	19.99	0.04	1.15	537.67
2000	5.34	0	24.32	536.78	5.48	4.42	8.26	14.01	0.04	0.47	599.11
Value ($Millions)											
1992	0.09	4.53	6.14	105.79	3.02	2.90	4.18	4.89	0.03	0	131.57
1993	0.43	2.35	5.19	63.91	1.24	1.61	2.38	2.78	0.10	0.08	80.06
1994	0.01	3.01	8.03	69.92	0.88	2.03	2.07	3.52	0.06	0.69	90.22
1995	0.09	3.85	11.61	87.61	2.09	3.52	4.45	2.82	0.02	0.07	116.12
1996	0.89	1.80	14.49	76.25	1.36	2.00	3.88	1.38	0.02	0.08	102.15
1997	2.2	3.94	20.09	138.49	3.00	3.13	4.11	3.04	0.02	0.72	178.75
1998	1.02	1.10	7.34	62.61	1.66	2.03	3.38	3.44	0.02	0.96	83.56
1999	2.82	0	11.02	92.73	3.01	2.32	6.58	4.16	0.03	0.23	122.89
2000	3.47	0	15.15	132.22	3.63	1.11	6.44	3.45	0.03	0.12	165.62

3.12.2.8 Oregon Coast Region

Overview. For the purposes of this analysis, ORCO is defined as the area encompassing Tillamook County, Lincoln County, and Clatsop County, as illustrated in Figure 3.12-9. This area includes those ports and communities in Oregon with the most direct ties to the Alaska groundfish fishery. ORCO has long had significant involvement in the Alaska groundfish fishery, from the development of the joint venture fishery through the present. The most visible aspect of this participation is the fleet of catcher vessels based in Oregon that participate in a variety of fisheries across the various Alaska regions. Though ORCO residents own fewer catcher vessels than the residents of any of the other regions profiled (42 in 1999), these vessels harvested more North Pacific groundfish by volume than the vessels from any other region except WAIW. In value of harvest, ORCO ranked behind both the Washington and Kodiak regions, but ahead of the other three Alaska regions. This activity is highly concentrated in the community of Newport. According to data in the Groundfish SEIS (NMFS 2001), for the period 1988-1998, Newport accounted for 72 percent of the total harvest volume and 67 percent of the total harvest value of Alaska groundfish by ORCO region owned vessels. No other regional port accounted for eight percent or more of the regional total. ORCO ports are important for local fisheries as well as the distant Alaska fisheries. Most of the fish landed in Oregon is delivered to Astoria or Newport, the county seats of Clatsop and Lincoln counties, respectively. Onshore facilities to process whiting (from Pacific Northwest waters) are concentrated in Newport.

Click on the associated link in the left column to download the figure or table.

Regional Economy. The ORCO economy is relatively diversified and relies heavily on the retail, service, and government sectors. Fish and timber are also significant components of the multi-industry "agriculture, forestry, fishing, and other" and "manufacturing" categories. Manufacturing, as measured by earnings, is similar in magnitude to the retail trade, service, and government sectors. As an aggregated category, however, it is not clear how much of this magnitude is due to fish-related activity. It is almost certain that none of this manufacturing activity is related to Alaska groundfish. There are no onshore plants in this region that process Alaska groundfish, and only one regionally owned longline catcher processor in the years 1992-1994 (none at present). Thus, none of this region's processing employment is attributable to Alaska groundfish.

Processing Ownership. There is no current ORCO ownership of Alaska groundfish processing capacity, and such ownership has been limited in the past.

Catcher Vessel Ownership. Catcher vessel ownership of Alaska groundfish vessels in this region is highly concentrated in Newport. Residents of Newport owned 44 percent of the groundfish vessels owned by the residents of the region over the period 1992-2000, and these vessels, in turn, accounted for 66 percent of the value of all groundfish landings by regionally owned vessels. No other community in the region accounted for more than 14 percent of regionally owned vessels, and none accounted for more than 6 percent of the total value of regionally owned vessels. On all measures, Newport is clearly the dominant ORCO community in terms of engagement with North Pacific groundfish fisheries in general, and the Bering Sea pollock fishery in particular. Of the vessels owned by ORCO residents that participate in the Alaska groundfish fishery, trawlers predominate, followed by pot vessels, longliners, and miscellaneous 'other' vessels in about equal numbers. Trawlers are the most active and productive component of this fleet. They are based primarily in Newport or the nearby area. In employment related to the Alaska groundfish fishery on regionally owned vessels, trawlers supplied the bulk of opportunities in 1998 (about 67 percent of the total). Pot vessels provided 16 percent and longliners about 18 percent. In 1999, retained harvest ex-vessel value derived 58 percent from the Bering Sea, 40 percent from the Central Gulf, and approximately 1 percent each from the Eastern Gulf and the Western Gulf. Value from the Aleutian Islands was negligible. On a species basis, in 1999 pollock accounted for 71 percent of volume and 48 percent of value of regionally owned vessels, while Pacific cod accounted for 25 percent of volume and 45 percent of value. ARSO and flatfish accounted for about 2 percent of volume each, and approximately 5 percent and 1 percent of value, respectively.

Catcher Vessel Diversity. Catcher vessels owned by ORCO residents have a specific dependence on the Alaska groundfish fishery, but generally participate in other Alaska fisheries. As a class, these vessels derive a clear majority of their Alaska ex-vessel value from groundfish activity. In 1998 groundfish accounted for almost two-thirds of the Alaska ex-vessel value accruing to this fleet. Crab make up about one-quarter of the ex-vessel value. About half of the groundfish vessels also participate in the halibut fishery, and about one of five participate in the salmon and crab fisheries. About one-third of the Oregon-owned groundfish catcher vessel fleet participates in Alaska fisheries other than groundfish, halibut, crab, or salmon (Groundfish SEIS, Appendix I).

Tables 3.12-38 through 3.12-43 summarize information on the ORCO regional engagement with the groundfish fishery through 2000.

Table 3.12-38 North Pacific groundfish fishery participation measures for Oregon Coast region, 1992-2000

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Processor Employment and Payments to Labor									
Employment (Est. FTEs)	45	45	53	53	0	0	0	0	0
Payment to Labor ($Millions)	2.69	2.77	3.11	2.19	0	0	0	0	0
Groundfish Processing by Regional Inshore Plants									
Reported Tons (Thousands)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Product (Thousands of Tons)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Utilization Rate (Percent)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Product Value ($Millions)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Value per Ton ($)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Processors Owned by Regional Residents									
Number of Processors Owned	2	2	2	2	0	0	0	0	0
Reported Tons (Thousands)	0	*	*	*	0	0	0	0	0
Wholesale Value ($Millions)	0	*	*	*	0	0	0	0	0
Catcher Vessels Owned by Regional Residents									
Number of Catcher Vessels	42	33	38	38	36	36	36	39	42
Retained Tons (Thousands)	73.6	72.4	72.8	84.2	78.6	73.0	76.3	74.7	72.6
Ex-vessel Value ($Millions)	22.82	14.89	14.60	22.41	18.98	21.87	15.94	22.78	24.07
Employment (Persons)	201	152	174	178	174	171	172	181	198
Payment to Labor ($Millions)	9.13	5.96	5.84	8.96	7.59	8.75	6.38	9.11	9.63

1) Includes all employment at all shoreplants located in the region and all employment of at-sea processors (including floaters) owned by residents. In addition the estimate includes administrative employment of all processors owned by residents. 2) All payments to labor from at-sea processors (including floaters) are assigned to the owners region. On-site payments to labor from shore plants are assigned to the region in which the plant is located.
Source: For processing information, NMFS Blend Data and WPR Data, June 2001 and Northern Economics (1994) internally derived tables. For harvest information, ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include “ghost” entities, while weight information includes “ghost” entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-39 Groundfish reported by Oregon Coast region inshore plants by species group

Groundfish Reported	Species Group				
	ARSO	Flatfish	Pacific Cod	Pollock	Total
1999 Tons (Thousands)	NA	NA	NA	NA	NA
1999 Product Value ($Millions)	NA	NA	NA	NA	NA
2000 Tons (Thousands)	NA	NA	NA	NA	NA
2000 Product Value ($Millions)	NA	NA	NA	NA	NA

Source: NMFS Blend Data and WPR Data, June 2001.

Table 3.12-40 Groundfish wholesale value of processor class owned by residents of the Oregon Coast region, 1992-2000

Processor Class	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
Catcher-Processors	1.12	1.00	0.52	0.87	0	0	0	0	0
Motherships	0	0	0	0	0	0	0	0	0
Shoreplants	0	0	0	0	0	0	0	0	0

Note: Value - $Millions.
Source: Derived tables, Northern Economics (1994) adapted from NMFS Blend Data and WPR Data, June 2001.

Table 3.12-41 Groundfish wholesale value of processor class owned by residents of the Oregon Coast region, 1992-2000

Retained Harvest	FMP Subarea					
	AI	BS	WG	CG	EG	Total
1999 Ex-vessel ($Millions)	0	13.16	0.34	9.05	0.22	22.78
2000 Ex-vessel ($Millions)	0.01	14.37	0.50	8.86	0.33	24.07

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001

Table 3.12-42 Number of boats and retained catch by weight and value, by species group, and by catcher vessel ownership for the Oregon Coast region

Data	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
ARSO									
Number of Catcher Vessels	30	27	30	35	27	29	31	37	35
Retained Tons (Thousands)	0.5	0.4	0.3	0.6	1.6	1.4	1.9	1.5	2.4
Ex-vessel Value ($Millions)	1.19	0.90	0.82	1.87	1.81	1.56	1.16	1.24	1.68
Flatfish									
Number of Catcher Vessels	21	17	17	27	18	22	23	29	27
Retained Tons (Thousands)	1.9	1.3	0.7	2.7	1.4	3.1	2.0	1.7	2.2
Ex-vessel Value ($Millions)	0.57	0.41	0.22	0.57	0.54	0.86	0.50	0.35	0.39
Pacific Cod									
Number of Catcher Vessels	35	25	24	32	27	30	29	31	35
Retained Tons (Thousands)	14.2	15.4	11.1	18.0	18.8	24.1	19.8	18.5	12.7
Ex-vessel Value ($Millions)	6.15	5.16	3.47	6.89	6.58	9.29	6.76	10.23	8.35
Pollock									
Number of Catcher Vessels	26	22	20	25	24	24	27	27	26
Retained Tons (Thousands)	57.1	55.2	60.7	62.9	56.8	44.4	52.6	53.0	55.4
Ex-vessel Value ($Millions)	14.91	8.42	10.10	13.08	10.04	10.16	7.51	10.96	13.65
All Groundfish Species									
Total Number of Catcher Vessels	42	33	38	38	36	36	36	39	42
Total Retained Tons (Thousands)	73.6	72.4	72.8	84.2	78.6	73.0	76.3	74.7	72.6
Total Ex-vessel Value ($Millions)	22.82	14.89	14.60	22.41	18.98	21.87	15.94	22.78	24.07

Source: ADF&G Fish Tickets and NMFS Observer Data, June 2001. Count information does not include "ghost" entities, while weight information includes "ghost" entities in order to minimize instances where data can not be reported due to NMFS confidentiality provisions. In all cases the values for Ghost Vessels are negligible.

Table 3.12-43 Retained harvests by FMP area and species of Oregon Coast regional catcher vessels

Year	FMP Area										Total
	Aleutian Islands		Bering Sea		Western Gulf		Central Gulf		Eastern Gulf		
	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	Pacific Cod	Pollock	
Volume (Thousands of Tons)											
1992	0.22	1.02	3.57	50.86	1.50	1.22	2.74	10.12	0.01	0	71.25
1993	0.09	0.78	6.01	33.87	0.67	2.06	4.48	22.56	0.02	0.10	70.65
1994	0	1.03	5.21	42.66	0.44	1.78	2.48	16.79	0.03	1.36	71.78
1995	0.04	1.03	7.76	58.86	1.02	2.75	3.52	5.89	0.04	0.02	80.93
1996	0.45	0.22	9.74	54.65	0.69	2.37	2.98	4.42	0	0.07	75.60
1997	0.61	0.14	9.36	39.82	1.02	2.62	4.59	10.11	0.02	0.24	68.52
1998	1.57	0.05	8.70	27.68	1.02	4.59	4.49	24.21	0.03	0.12	72.47
1999	1.68	0.03	6.77	34.11	0.73	2.51	5.72	19.81	0.01	0.10	71.47
2000	1.53	0	5.52	44.18	0.62	2.34	2.51	11.1	0.01	0.29	68.1
Value ($ Millions)											
1992	0.1	0.33	1.57	13.61	0.65	0.36	1.49	2.95	0	0	21.06
1993	0.03	0.13	2.02	5.17	0.25	0.30	1.74	3.93	0.01	0.02	13.58
1994	0	0.19	1.59	7.19	0.15	0.30	0.90	3.01	0.01	0.24	13.57
1995	0.01	0.23	2.89	12.73	0.40	0.55	1.72	1.40	0.02	0	19.97
1996	0.16	0.04	3.51	9.85	0.25	0.48	1.31	1.00	0	0.02	16.62
1997	0.28	0.03	3.84	9.38	0.44	0.66	2.26	2.51	0.01	0.05	19.44
1998	0.54	0.01	3.07	3.89	0.38	0.67	1.78	3.90	0.01	0.02	14.28
1999	0.93	0.01	3.70	7.27	0.40	0.58	3.83	4.45	0.01	0.02	21.19
2000	1.07	0	3.78	11.28	0.43	0.62	1.85	2.90	0.01	0.08	22.00

3.12.2.9 CDQ Region Existing Conditions

CDQ region existing conditions are discussed in detail in Appendix F(4), and are not recapitulated here. Additional information is also presented in Section 2.5.1.4 ("The CDQ Fishery") and in the RIR (Appendix C to this document) in Section 1.4.3.4.

3.12.2.10 Environmental Justice Existing Conditions

Introduction[3]

Concerns regarding environmental equity are generally termed Environmental Justice. Environmental Justice can also be defined as "the determination of equal justice and equal protection under the law for all environmental statutes and regulations without discrimination based on race, ethnicity, and /or socioeconomic status" (Bryant, 2001). Environmental Justice issues encompass a broad range of impacts including those on the natural and physical environment and related social cultural and economic effects. Executive order 12898 (Environmental Justice, 59 Fed. Reg. 7629 [1994]) requires each federal agency to achieve environmental justice by addressing "disproportionately high and adverse human health and environmental effects on minority and low-income populations."

In order to determine whether Environmental Justice concerns exist, the demographics of the relevant area are examined to determine whether minority populations or low-income populations are present and could be disproportionately impacted by the proposed alternatives. The question as to whether a proposed alternative raises environmental justice issues depends to a large degree on the history or circumstances of of a particular community or population, as well as the specific ties of that community or population to the resources (or access to resources) that will be changed by the alternative.

There is no standardized methodology for identification or analysis of environmental justice issues. The demographics of the affected area should be examined to determine whether minority populations, low income populations are present if so, a determination must be made as to whether the implementation of the alternatives may cause disproportionately high and adverse human health or environmental effects on the minority populations, or low income populations present.

In determining what constitutes a low-income or minority 'population' CEQ guidance, with specific regard to minority populations states: "if the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographical analysis." While no available federal guidance addresses the determination of low-income populations, a similar approach has generally been adopted when preparing NEPA documents (King, 2001). The U.S. EPA has stated that addressing environmental justice concerns is entirely consistent with NEPA and that disproportionately high and adverse human health or environmental effects on minority or low-income populations should be analyzed with the same tools currently intrinsic to the NEPA process. NOAA environmental review procedures[4] state that, unlike NEPA, the trigger for analysis under Executive Order 12898 is not limited to actions that are major or significant, and hence Federal agencies are mandated to

[3] The environmental justice existing conditions information is specifically called out in its own section in this Final SEIS. In the Draft SEIS, data sufficient for environmental justice analysis were presented in Appendix F(1), but those data are now abstracted and drawn together into one focused section for ease of identification and review. Similarly, environmental justice impacts, implicit in the alternatives analysis in the Draft SEIS, are now spelled out in a designated section (Section 4.12.2.3) for ease of review in this Final SEIS.

[4] NOAA *Environmental Review Procedures for Implementing the National Environmental Policy Act* (Issued 06/03/99)

identify and address, as appropriate "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

Community Variations and Data Limitations

The population structure of the regions vary considerably. As discussed below and elaborated in Appendix F(1), within Alaska, and particularly in the Aleutian and Kodiak regions, there is a relationship between the percentage of Alaska Native population and commercial fisheries development. Specifically, communities that have developed as large commercial fishing communities becoming less Native in composition over time compared to other communities in the region. There are many variables involved, but most communities noted the relationship is quite straightforward. The fishery has also had an impact on the male-female population balance for some of the Alaskan communities that are the focus of intensive groundfish processing. This is due to the fact that processing workers reside within these communities for varying durations, and that this workforce is predominately male. While this type of direct impact on population structure attributable to groundfish is seen in few communities, these tend to be the communities with the highest level of groundfish-related processing activities and the highest engagement in, and dependence upon, the fishery. The differences in the male/female and Native/non-Native population segments are, to a degree, indicative of the type of articulation of the directly fishery-related population with the rest of the community. Again, this varies considerably from place to place and is not apparent in the Alaska Southcentral and Southeast regions in the same way it is in the Aleutian and Kodiak regions.

Interpretation of these data, in terms of engagement with the community, is less straightforward for some regions than for others. As detailed in the regional discussions, and in the community profiles in Appendix F(1), communities are engaged in, and dependent upon, the fishery in quite different ways through resident catcher vessel fleets, onshore processing facilities, and locally associated catcher-processor (and/or mothership) entities. While no consistent data are available, field observations would tend to indicate that ownership and crew demographics of the residential catcher vessel fleet for the relevant Alaska groundfish communities tend to mirror the community demographics at large. This situation would also appear to hold true for the smaller vessel catcher processor sectors based in the various Alaska regions. For the larger vessel catcher-processor and mothership sectors, those are to a large degree associated with the Washington region (with the caveat that ownership patterns have been changing in recent years and the percentage of Alaska based ownership in general and Alaska CDQ ownership in particular has increased, as discussed at length elsewhere in this document), and crews tend to be drawn from a wide area rather than a particular community. These factors are discussed in a separate section below. For the large processing plants that utilize groundfish, the demographics of the workforce and the relation to the 'host' communities tend to be more complex, have substantial environmental justice implications, and are discussed at length below.

In some Alaska groundfish communities, processing plants tend to be industrial enclaves somewhat separate from the rest of the community, while for others there is no apparent differentiation between the processing workforce and the rest of the regional or local labor pool. A further complication for attribution of socioeconomic impacts to a regional base is the fact that for many workers in many of the sectors, groundfish-related work is performed in a region or community that is separate from where they have a number of other socioeconomic ties. It is not uncommon for fishery related workers to spend relatively little money in their work region and to send pay 'home' to another community or region. In this sense, regional employment is indicative of a volume of economic activity, if not a specific level of labor activity directly comparable to other industries. The importance of this flow varies from region to region and from sector to sector, but is most apparent within communities that are most heavily engaged in the processing aspect of the groundfish fishery. For the purposes of this environmental justice analysis, however, these populations

will be characterized as being resident in their residential workplace communities, consistent with U.S. Census methodology. One of the current limitations of U.S. Census data however, is that not all of the 2000 data relevant to this environmental justice analysis have been released. Ethnicity by housing type (e.g., by ethnicity by group quarters and non-group quarters), particularly useful for examining resident processing workforce numbers in Alaska coastal communities for this analysis, is not available, so data from the 1990 U.S. Census are presented, keeping with the established practice of using federal census data for environmental justice analysis. Unfortunately for this analysis, however, the groundfish fishery has changed a great deal since 1990 in many ways, including the size and distribution of the workforce. This being the case, the 1990 census data were supplemented with data gathered from industry sources that characterize their workforce demographics for 2000. These data suggest that the workforce has come to include a much larger minority population component than was the case a decade earlier and reflected in the 1990 census information.

Some caution must be given, however, in the comparison of the two different 1990 and 2000 resident workforce related data types. That is, in order to supplement the dated 1990 U.S. Census data that is being used to infer the structure of the locally present or resident fishery associated workforce, industry was asked to provide 2000 workforce demographics for their individual groundfish processing operations.[5] It is

[5] During discussion of the environmental justice analysis for this SEIS at the October, 2001 meetings of the North Pacific Fishery Management Council in Seattle, the question was raised during the Advisory Panel discussion of whether or not environmental justice provisions applied to non-U.S. citizens, and the implication of this question for the analysis, given that a substantial number of resident aliens work in the local seafood processing plants. If it is assumed that Executive Order 12898 is premised on the application of the equal protection clause, then it should not matter whether the affected population consists entirely or primarily of citizens or resident aliens. A long line of Supreme Court cases holds that the Equal Protection Clause of the U.S. Constitution applies to resident aliens (See Kim Ho Ma v. Ashcroft, 257 F. 3d 1095, 1108-09 and fn. 23 [July 27, 2001]). Although a distinction has been drawn concerning the extent to which constitutional protections may apply to non-resident aliens who are seeking admission to the U.S. but are not yet present within its borders, the clear weight of authority holds that once an alien is present within the borders of the United States, regardless of whether his or her entry was legal or illegal, he or she has constitutional rights, including the right to equal protection of the laws (Id. at 1109). Importantly, the Environmental Protection Agency (EPA) defines environmental justice to mean the "fair treatment of people of all races, cultures, and incomes" and guidelines include: "Conducting our programs, policies, and activities that substantially affect human health and the environment in a manner that ensures the fair treatment of *all people*, including minority populations and/or low-income populations; Ensuring *equal enforcement* of protective environmental laws for all people, including minority populations and/or low income populations" (http://www.epa.gov/swerosps/ej/html-doc/ejmemo.htm, emphasis added). Further, the EPA Environmental Justice " F.A.Q." answers the question of "What is Environmental Justice?" by stating it is 'To ensure that *all people*, regardless of race, *national origin* or income are protected from disproportionate impacts of environmental hazards" (http ://es.epa.goc/oeca/main/ej/faq.html, emphasis added). Additionally, data gathered by the United States Bureau of the Census often constitute the statistical foundation for examining the environmental justice implications of government decisions, and the decennial census remains the most widely used source of data to characterize populations based on race or ethnicity (Gerrard, 1999). The methodology of the Census, i.e., where all persons are counted, argues strongly for the inclusion of foreign nationals in the environmental justice analysis. By way of background, the first U.S. decennial census in 1790 established the concept of "usual residence" as the main principle in determining where people were to be counted. This concept has been followed in all subsequent censuses. Usual residence has been defined as the place where the person lives and sleeps most of the time, and is not necessarily the same as the person's voting or legal residence. Also, noncitizens who are living in the United States are included, regardless of their immigration status (foreign nationals who are visiting the country only briefly or reside in foreign embassies are not counted). There have been acknowledged difficulties with counting persons of questionable residency status, and on March 13, 2000, the Immigration and Naturalization Service issued a memo outlining the guidelines for the INS' operations during the 2000 census. In general, the INS has taken the position that all foreign nationals, even those who are in the United States illegally, should participate in the census. However, is generally believed that past census counts have undercounted the nation's illegal alien population. In order to prevent this during the 2000 census, the INS issued these guidelines, to ensure that no information gained through the census will be obtained or used by the INS against illegal aliens. Moreover, according to the comprehensive text *The Law of Environmental Justice* (Gerrard, 1999) both EPA and the General Service Administration (GSA) guidance documents generally concur with CEQ's data collection and environmental assessment strategy, and both go further in their own recommendations. In addition to identifying the proportion of the population of individual census tracts that are composed of minority individuals, EPA suggests that its analysts also attempt to identify whether "high concentration 'pockets' of

important to note that these data were not collected using a methodology similar to that used for the U.S. Census data, and this should be taken into account in the interpretation of the information. These data are self-reported and, like other self-reported data, there may be an inherent self-interest bias to at least some degree found within the information. Whatever bias exists, however, is considered likely to be relatively small and not sufficient to materially alter the overall assessment of whether or not the local seafood processing workforce represents a population segment that is "meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographical analysis" such as the specific community or region. Further, in each relevant Alaska region, these data are supplemented with age and sex data from the 1990 and 2000 U.S. Census that allow a cross-check on the both the gross and relative changes in the 'industrial' population segment in the communities.

The situation is markedly different for the greater Seattle area. Seattle is, in absolute terms, the community most engaged in the groundfish fishery among many of the important indices of involvement, but it is also the least engaged in terms of the relative importance of the fishery to the overall population and economy of the community (as discussed in detail in Appendix F(1)). Summary information relevant to environmental justice considerations is presented at the end of this section.

The CDQ region presents yet another type of environmental justice context, through the nature of the demographic and economic structure of this region, and the nature of the participation of this region and its communities in the fishery through the various mechanisms of the CDQ program as it has been implemented in different subregions by different CDQ groups. This is noted at the end of this section, and discussed in detail in Appendix F(4).

Alaska Peninsula/Aleutian Islands Region

General Community Population Attributes

Alaska Peninsula/Aleutian Island region communities with the strongest direct engagement in, and dependence upon, the North Pacific groundfish fishery are Unalaska, Akutan, Sand Point, and King Cove.[6] These four communities, and their specific ties to the groundfish fishery, are profiled in detail in Appendix F(1). In this section, community level information relevant to environmental justice analysis is summarized.

minority populations are evidenced in specific geographic areas." EPA cautions that traditional census-based population tract data may miss high "pockets" of minority or low-income communities. Census data have proven unreliable in some cases, "in part because the level of aggregation may not offer a fine enough mesh to identify the existence of minority and/or low-income populations. As such, and because census data rely on self-reporting, these data are not always "consistent" and are "prone to undercounting" minority and low-income populations "due to a perceived reluctance for certain population to divulge information." EPA thus recommends that census data be supplemented with data from other sources, such as local agencies; locality specific questions, interviews, and research; outreach to community groups; geographical information system (GIS), or other mapping systems. In this specific SEIS instance, industry provided data are used to identify such 'pockets' of minority populations within various groundfish communities that are relevant to the analysis of the proposed alternatives. (Further details on Alaska residency versus non-state residency are discussed in Appendix F(1), but are not relevant here, due to the fact that EO 12898 is a federal and not a state directive.)

[6] As noted in Appendix F(1), there are also ties, if less pervasive or historically established ones, to Adak, Chignik, False Pass, and St. Paul, but these communities are not detailed in this section.

Table 3.12-44 provides ethnicity information from the 2000 census for each of the four communities.[7] As shown, these communities vary widely in their population structure. For example, Unalaska is the largest community, but has the lowest Alaska Native population percentage, and King Cove and Sand Point have a much higher Alaska Native population component than either of the other two communities. (Akutan, while having a relatively low Alaska Native population percentage is arguably the 'most traditional' Aleut community, however, as noted below.) Unalaska has a far higher white or non-minority population percentage than the other three communities. Asian residents represent the largest population segment in Akutan, and the second largest Unalaska (behind whites) and King Cove (behind Alaska Natives), and the third largest in Sand Point (behind Alaska Natives and whites.) These communities have quite different histories with respect to the growth of the different population segments present in the community in 2000. Each is summarized briefly below. One important constant across all of these communities is that each is a 'minority community' in the sense that minorities make up a majority of the population in each community.

Table 3.12-44 Ethnic Composition of Population, Selected Alaska Peninsula/Aleutian Island Region Communities, 2000

Race/Ethnicity	Unalaska		Akutan		King Cove		Sand Point	
	N	%	N	%	N	%	N	%
White	1,893	44.2%	168	23.6%	119	15.0%	264	27.7%
African American	157	3.7%	15	2.2%	13	1.6%	14	1.5%
Native American/Alaska Native	330	7.7%	112	15.7%	370	46.7%	403	42.3%
Nat. Hawaiian/Other Pac Islander	24	0.6%	2	0.3%	1	0.1%	3	0.3%
Asian	1,312	30.6%	275	38.6%	212	26.8%	221	23.2%
Some Other Race	399	9.3%	130	18.2%	47	5.9%	21	2.2%
Two Or More Races	168	3.9%	11	1.5%	30	3.8%	26	2.7%
Total	4,283	100%	713	100%	792	100%	952	100%
Hispanic*	551	12.9%	148	20.8%	59	7.4%	129	13.6%

Source: U.S. Bureau of Census.
* 'Hispanic' is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

Unalaska may be described as a plural or complex community in terms of the ethnic composition of its population. Although Unalaska was traditionally an Aleut community, the ethnic composition has changed with people moving into the community on both a short-term and long-term basis. Not surprisingly, in the latter half of the 20th century, population fluctuations have coincided with periods of resource exploitation and scarcity.[8] For example, the economic and demographic expansion associated with the King crab boom

[7] As a methodological note, community populations vary quite a bit throughout the year as seasonal workers are brought in to the smaller Alaska communities to provide an adequate workforce for peak seafood processing demand. U.S. Census data do not take yearly averages, but rather represent a one time count. During the 1990 census, for example, information for rural Alaska communities was collected during the months of January through April1990 according to the Institute for Social and Economic Research at the University of Alaska. Although these data cannot represent the complexity of groundfish community the population dynamics, they do represent the best available data set that is comparable across communities and regions.

[8] The most dramatic population shift of this century, however, was brought about by World War II. The story of the War, and the implications for the Aleut population of Unalaska and the other Aleut communities of Unalaska Island, is too complex and profound for treatment in this limited community profile. It may be fairly stated, however, that the events associated with World

in the late 1970s and early 1980s brought many non-Aleuts to Unalaska, including Euro-North Americans, Filipinos, Vietnamese, Koreans, and Hispanics. The Euro-American population shows a distinct change over the years, comprising around 30 percent of the population in 1970, over 60 percent in 1980 and 1990, and then back to 44 percent in 2000. The growth of Asian/Pacific Islander population (over 30 percent by 2000) is closely associated with the increasingly residential nature of the seafood processing sector workforce. Apart from the War years, prior to the growth of the current commercial-fisheries-based economy, Unalaska was an Aleut community. Since this development, however, the change over the period of 1970 - 1990 is striking. In 1970, Aleut individuals made up slightly over 60 percent of the total community population (and Alaska Natives accounted for a total of 63 percent of the population). In 1980, Alaska Natives, including Aleuts, accounted for 15 percent of the population; by 1990, Aleuts comprised only 7 percent of the total community population (with Alaska Natives as a whole accounting for 8 percent of the population). Overall representation was similar in 2000. This population shift is largely attributable to fisheries and fisheries-related economic development and associated immigration.[9]

Akutan is a unique community in terms of its relationship to the Bering Sea groundfish fishery. It is the site of one of the largest of the shoreplants in the region, but it is also the site of a village that is geographically and socially distinct from the shoreplant. This 'duality' of structure has had marked consequences for the relationship of Akutan to fishery. One example of this may be found in Akutan's status as a CDQ community. Initially (in 1992), Akutan was (along with Unalaska) deemed not eligible for participation in the CDQ program based upon the fact that the community was home to "previously developed harvesting or processing capability sufficient to support substantial groundfish participation in the BSAI . . ." though they met all other qualifying criteria. The Akutan Traditional Council initiated action to show that the community of Akutan, per se, was separate and distinct from the seafood processing plant some distance away from the residential community site, that interactions between the community and the plant were of a limited nature, and that the plant was not incorporated in the fabric of the community such that little opportunity existed for Akutan residents to participate meaningfully in the Bering Sea pollock fishery (i.e., it was argued that the plant was essentially an industrial enclave or worksite separate and distinct from the traditional community of Akutan and that few, if any, Akutan residents worked at the plant). With the support of the Aleutian Pribilof Island Community Development Association (APICDA) and others, Akutan was successful in a subsequent attempt to become a CDQ community and obtained that status in 1996. This action highlights the fundamentally different nature of Akutan and Unalaska. Akutan, while deriving economic benefits from the presence of a large shoreplant near the community proper, has not articulated large-scale commercial fishing activity with the daily life of the community as has Unalaska, nor has it developed the type of support economy that is a central part of the socioeconomic structure of Unalaska. While US Census figures show Akutan had a population of 589 in 1990 and 713 in 2000, the Traditional Council considers the "local" resident population of the community to be around 80 persons, with the balance being considered "non-resident employees" of the seafood plant. This definition, obviously, differs from census, state, and electoral definitions of residency, but is reflective of the social reality of Akutan. The residents of the village of Akutan, proper, are almost all Aleut.

Sand Point and King Cove share a more or less common development history, but and one quite different from either Unalaska or Akutan. Sand Point was founded in 1898 by a San Francisco fishing company as

War II, including the Aleut evacuation and the consolidation of the outlying villages, forever changed the community and Aleut sociocultural structure.

[9] The fact that there is a "core" Aleut population of the community with a historical continuity to the past also has implications for contemporary fishery management issues. These include the activities of the Unalaska Native Fisherman Association and active local involvement in the regional CDQ program. While neither of these undertakings exclude non-Aleuts, Aleut individuals are disproportionately actively involved (relative to their overall representation in the community population).

a trading post and cod fishing station. Aleuts from surrounding villages and Scandinavian fishermen were the first residents of the community. King Cove was founded in 1911 when Pacific American Fisheries built a salmon cannery. Early settlers were Scandinavian, European, and Aleut fishermen. Historically, both of these communities saw a large influx of non-resident fish tenders, seafood processing workers, fishers, and crew members each summer. For the last several decades, both communities were primarily involved in the commercial salmon fisheries of the area, but with the decline of the salmon fishery, plants in both communities have diversified into other species. In more recent years, the processing plants in both communities have become heavily involved in the groundfish fishery, although their structural relationships to the fishery have diverted since the passage of the American Fisheries Act (AFA). As detailed in Appendix F(1), processing facilities in both communities qualified as AFA entities, however, King Cove qualified for a locally based catcher vessel co-op while Sand Point did not.

The following two tables present information on income, employment, and poverty for the relevant groundfish communities of the region. These tables are based on 1990 U.S. Census data as the comparable 2000 data has not been released as of the time of this writing. Although these data are somewhat dated, they do provide useful comparative information. Table 3.12-45 displays median household and family income. As shown, the range is large for the communities shown. For example, median family income in both King Cove and Unalaska is approximately double the comparable figure for Akutan. This does not reflect the entire range for the region, however, as several communities in the region without commercial groundfish development (Adak, Atka, False Pass, and Nikolski) have lower median family income. In 1990, King Cove had the highest median family income in the region at $63,419 and Nikolski the lowest at $17,250.

Table 3.12-45 Household Income Information, Selected Alaska Peninsula/Aleutian Island Region Communities, 1990

Community	Housing Units	Occupied HU	Vacant HU	Total Households	Average Persons Per HH	Median HH Income	Family Households	Median Family Income
Akutan	34	31	3	31	3	27,813	19	31,875
King Cove	195	144	51	144	3	53,631	118	63,419
Sand Point	272	242	30	242	3	42,083	159	43,125
Unalaska	682	575	107	575	3	56,215	299	61,927

Source: US Bureau of Census

Table 3.12-46 displays data on employment and poverty information for the relevant communities for 1990. As shown, there is virtually no unemployment in these communities, no doubt due in large part to the presence of fishery related employment opportunities. Percentage of poverty varies between the communities, but these communities again do not represent the range of regional variation. In 1990, Atka had the highest unemployment in the region at 25.7 percent, whereas Cold Bay, False Pass, Nelson Lagoon, and Nikolski had no employment as all members of the workforce (a subset of the total population) that were seeking employment were actually employed. This figure is somewhat misleading as in some communities a large portion of the adult population may not be working and not seeking employment. In 1990, Nelson Lagoon was the extreme example of this with 81 percent of the adults not working. In 1990, percent of poverty in the region ranged from zero percent in Cold Bay to 42 percent in St. George. Data do not vary consistently with the presence or absence of commercial fishery development as might be expected. For example, Atka shows a very high rate of unemployment and percent of adults not working, yet there is a

smaller percentage of persons in poverty than in Akutan, a community with an unemployment rate of less that one percent. This is attributable, in part, to the fundamentally different natures of the communities, with Atka being a small village and Akutan being a community with a large processing facility adjacent to the traditional village site. False Pass, Nelson Lagoon, Nikolski, and St. George, none of which have fish processing facilities, all have over 50 percent of the adults in the community not working. The contrast between these and the other communities is reflective of both lack of economic development in these communities and the nature of the workforce population in communities with shore plants, where large numbers of processing workers are present, tend not to have non-working adult family members present with them, and tend to be in the community exclusively for employment purposes.

Table 3.12-46 Employment and Poverty Information, Selected Alaska Peninsula/Aleutian Island Region Communities, 1990

Community	Total Persons Employed	Unemployed	Percent Unemployment	Percent Adults Not Working	Not Seeking Employment	Percent Poverty
Akutan	527	2	0.4%	7.4%	40	16.6%
King Cove	276	5	1.8%	24.0%	82	10.0%
Sand Point	438	13	2.9%	32.1%	194	12.5%
Unalaska	2,518	26	1.0%	7.8%	186	15.3%

Source: US Bureau of Census

Population Attributes of the Resident Groundfish Fishery Workforce

Beyond the overall population figures for the individual communities, it is important for the purposes of environmental justice analysis to examine information on the residential groundfish fishery workforces. It is likely that employment and income losses associated with at least some of the alternatives would be felt among the local seafood processing workers, and these workers do not represent a random cross-section of the community demography. One method to examine the relative demographic composition of the local processing workforces is to utilize group quarter housing data from the U.S. Census (keeping with the established practice of using U.S. Census data for environmental justice analysis). This information is presented by community in the following series of tables. Unfortunately, ethnicity by housing type for the 2000 census has not yet been released at the time of this writing. The group ethnicity by housing type data in the following tables are therefore drawn from the 1990 census (and a subsequent section supplements this information with industry provided figures for 2000, see below). This is supplemented by age and sex data from the 1990 and 2000 U.S. Census to provide a cross check of census (and industry provided) data and the population structure over this period as well. (This approach is applied to other regions subsequently discussed as well.)

Table 3.12-47 provides information on group housing and ethnicity for Unalaska. Group housing in the community is largely associated with the processing workforce. As shown, 52 percent of the population lived in group housing in 1990. Also as shown, the total minority population proportion was substantially higher in group quarters (49 percent) than in non-group quarters (31 percent). With the population growth seen in association with the development of the commercial fishing industry, Unalaska's population has had significantly more men than women. Historically, this has been attributed to the importance of the fishing industry in bringing in transient laborers, most of whom were young males. Table 3.12-48 portrays the changes in proportion of males and females in the population for the years 1970, 1980, 1990, and 2000.

Census data from the period 1970-1990 showed a climb in median age from 26.3 years to 30.3 years and then a further jump to 36.5 years in 2000. This is commonly attributed to the relative size of the workforce in comparison to resident families.

Table 3.12-47 Ethnicity and Group Quarters Housing Information, Unalaska, 1990

	Total Population		Group Quarters Population		Non-Group Quarters Population	
Unalaska City	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White	1917	62.06	870	53.90	1047	70.98
Black	63	2.04	55	3.41	8	0.54
American Indian, Eskimo, Aleut	259	8.38	20	1.24	239	16.20
Asian or Pacific Islander	593	19.20	434	26.89	159	10.78
Other race	257	8.32	235	14.56	22	1.49
Total Population	3089	100.00	1614	100.00	1475	100.00
Hispanic origin, any race	394	12.75	337	20.88	57	3.86
Total Minority Pop	1252	40.53	795	49.26	457	30.98
Total Non-Minority Pop (White Non-Hispanic)	1837	59.47	819	50.74	1018	69.02

Source: Census 1990 STF2

Table 3.12-48 Population by Age and Sex, Unalaska: 1970, 1980, 1990, and 2000

	1970		1980		1990		2000	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Male	98	55%	858	65%	2,194	71%	2,830	66%
Female	80	45%	464	35%	895	29%	1,453	34%
Total	178	100%	1,322	100%	3,089	100%	4,283	100%
Median Age	26.3 years		26.8 years		30.3 years		36.5 years	

Source: US Bureau of Census

Table 3.12-49 provides information on group housing and ethnicity for Akutan. Group housing in the community is almost exclusively associated with the processing workforce. As shown, 85 percent of the population lived in group housing in 1990, which represents the extreme of the four communities considered in this region. Also as shown, the ethnic composition of the group and non-group housing segments were markedly different, with the non-group housing population being predominately (83%) Alaska Native, and the group housing population having almost no (1%) Alaska Native representation. Table 3.12-50 shows the population composition by sex in 1990 and 2000, and is clearly indicative of a male-dominated industrial site rather than a typical residential community.

Table 3.12-49 Ethnicity and Group Quarters Housing Information, Akutan, 1990

	Total Population		Group Quarters Population		Non-Group Quarters Population	
Akutan	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White	227	37.52	212	42.32	15	17.05
Black	6	0.99	6	1.20	0	0.00
American Indian, Eskimo, Aleut	80	13.22	7	1.40	73	82.95
Asian or Pacific Islander	247	40.83	247	49.30	0	0.00
Other race	29	4.79	29	5.79	0	0.00
Total Population	589	100.00	501	100.00	88	100.00
Hispanic origin, any race	45	7.44	45	8.98	0	0.00
Total Minority Pop	342	56.53	298	59.48	73	82.95
Total Non-Minority Pop (White Non-Hispanic)	247	40.83	203	40.52	15	17.05

Source: Census 1990 STF2

Table 3.12-50 Population by Age and Sex, Akutan: 1990 and 2000

	1990		2000	
	N	**%**	N	%
Male	449	76%	549	77%
Female	140	24%	164	23%
Total	589	100%	713	100%
Median Age	NA		40.2 years	

Source: US Bureau of Census

Table 3.12-51 provides information on group housing and ethnicity for King Cove. As for the other communities, group housing in the community is largely associated with the processing workforce. As shown, 42 percent of the population lived in group housing in 1990. Also as shown, ethnicity varied between the group and non-group housing, with the non-group housing population being 67 percent Alaska Native and 6 percent Asian or Pacific Islander and the group housing population being 39 percent Alaska Native and 58 percent Asian or Pacific Islander. The male to female ratio shown in Table 3.12-52 is also consistent with a transient workforce.

Table 3.12-51 Ethnicity and Group Quarters Housing Information, King Cove, 1990

King Cove	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	127	28.16	57	30.16	70	26.72
Black	6	1.33	6	3.17	0	0.00
American Indian, Eskimo, Aleut	177	39.25	1	0.53	176	67.18
Asian or Pacific Islander	125	27.72	109	57.67	16	6.11
Other race	16	3.55	16	8.47	0	0.00
Total Population	451	100.00	189	100.00	262	100.00
Hispanic origin, any race	53	11.75	53	28.04	0	0.00
Total Minority Pop	331	73.39	139	73.54	192	73.28
Total Non-Minority Pop (White Non-Hispanic)	120	26.61	50	26.46	70	26.72

Source: Census 1990 STF2

Table 3.12-52 Population by Age and Sex, King Cove: 1990 and 2000

	1990		2000	
	N	%	N	%
Male	292	65%	472	60%
Female	159	35%	320	40%
Total	451	100%	792	100%
Median Age	NA		34.9 Years	

Source: US Bureau of Census

Table 3.12-53 provides information on group housing and ethnicity for Sand Point. As shown, 21 percent of the population lived in group housing in 1990, which is low for the four communities detailed within this region. Also as shown, almost no Alaska Natives live in group quarters, while few Asians live outside of group quarters. As shown in Table 3.12-54, the significant male to female imbalance seen in other communities is present in Sand Point as well.

Table 3.12-53 Ethnicity and Group Quarters Housing Information, Sand Point, 1990

Sand Point	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	284	32.35	48	25.40	236	34.25
Black	4	0.46	4	2.12	0	0.00
American Indian, Eskimo, Aleut	433	49.32	3	1.59	430	62.41
Asian or Pacific Islander	87	9.91	80	42.33	7	1.02
Other race	70	7.97	54	28.57	16	2.32
Total Population	878	100.00	189	100.00	689	100.00
Hispanic origin, any race	78	8.88	58	30.69	20	2.90
Total Minority Pop	601	68.45	146	77.24	455	66.04
Total Non-Minority Pop (White Non-Hispanic)	277	31.55	43	22.76	234	33.96

Source: Census 1990 STF2

Table 3.12-54 Population by Age and Sex, Sand Point: 1990 and 2000

	1990		2000	
	N	%	N	%
Male	557	63%	593	62%
Female	321	37%	359	38%
Total	878	100%	952	100%
Median Age	NA		36.5 Years	

Source: US Bureau of Census

Industry Provided Data

Information on 2000 workforce demographics was obtained for four of the six major groundfish shoreplants in the Alaska Peninsula/Aleutian Islands region, as well as one of the two floating processors that are classified as inshore plants. Communities cannot be discussed individually because of confidentiality concerns. However, the total combined reported workforce of 2,364 persons was classified as 22.5 percent white or non-minority, and 77.5 percent minority. Reporting shoreplants ranged from having a three-quarters minority workforce to an over 90 percent minority workforce. It is worth noting that different firms provided different levels of detail in the breakout of the internal composition of the minority component of their workforce. For some plants, the total minority figure was not disaggregated, and too few plants within this region provided detailed data to allow region-specific discussion. However, all of the shoreplants in any region that provided detailed data have workforces that are 5 percent or less African American and 5 percent or less Alaska Native/Native American. The group classified as Asian/Pacific Islander was the largest minority group in two-thirds of the plants in any region reporting detailed data, and the group classified as Hispanic was the largest minority group in the remaining one-third. Two entities provided time series data. One provided data spanning a 10 year period, while the other provided information covering a four year span. For the former, the minority workforce component increased over time; for the latter no unidirectional trend existed.

Regional Summary

The communities in the region that are most engaged in, and dependent upon, the groundfish fishery are those with populations comprised of more minority residents than non-minority residents. The structure of the minority population component varies from community to community, as does the proportion of the community population that is comprised of Alaska Native residents. Further, the workforce at the processing plants that would likely feel the impacts of the alternatives are overwhelmingly comprised of minority workers. While no systematic quantitative data are known, field observations would suggest that for a very substantial portion of the workforce, English is a second language (this is reinforced by data from local schools regarding such as Unalaska, where 47 percent of the entering kindergarten students in 2000-2001 were ESL [English as a second language] students) and languages other than English are the commonly utilized in the workplace among processing crews. These factors, along with limited opportunity to acquire job skills in other economic sectors, would tend to indicate that these populations would be less able to easily acquire alternative employment outside of the seafood industry if there were widespread job reductions as a result of the alternatives. However, information on the level of job turnover/rates of rehire (discussed in Appendix F(1)) suggest that there is a fair degree of mobility among at least part of this workforce.

Kodiak Island Region

General Community Population Attributes

Within the Kodiak region, the City of Kodiak is the location of virtually all of the direct links with the groundfish fishery. Given these circumstances, it will be the only regional community discussed in detail.[10]

Kodiak is a complex community in terms of the ethnic composition of its population. Sugpiaqs (Koniags) were the original inhabitants of Kodiak Island. Beyond earlier development, fishing and military buildup associated with World War II brought many non-Natives to Kodiak, primarily Caucasians but also a substantial number of non-Native minorities, at least initially associated primarily with fish processing employment. Detailed information on community growth and the relative growth of different population segments is provided in Appendix F(1). The Alaskan Native population has remained at approximately the same percentage since the 1970s, but the white (non-minority) population has declined in terms of percentage over time. Overall, there has thus been a gradual, long-term shift in ethnic composition, with Asian and Pacific Islanders increasing in percentage. 2000 Census data detailing ethnicity are presented in Table 3.12-55. As shown, the majority of Kodiak's population is comprised of minority residents.

[10] Processing data does show that groundfish are also run at Alitak, but this is a relatively specialized operation and very small relative to the aggregated operations associated with the City of Kodiak.

Table 3.12-55 Ethnic Composition of Population Kodiak City; 2000

Race/Ethnicity	2000	
	N	%
White	2,939	46.4%
African American	44	0.7%
Native American/Alaska Native	663	10.5%
Native Hawaiian/Other Pacific Islander	59	0.9%
Asian	2,010	31.7%
Some Other Race	276	4.3%
Two or More Races	343	5.4%
Total	6,334	100%
Hispanic*	541	8.5%

Source: U.S. Bureau of Census.
* 'Hispanic' is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

The following two tables present information on income, employment, and poverty for the City of Kodiak and the Kodiak Island Borough. These tables are based on 1990 U.S. Census data as the comparable 2000 data has not been released as of the time of this writing. Although these data are somewhat dated, they do provide useful comparative information. Table 3.12-56 displays median household and median family income. As shown, the City of Kodiak is above the borough averages. For example, median family income in Kodiak itself is about 4 percent higher than the borough as a whole. Compared to all communities in the region, the City of Kodiak places at the upper end of the range. In 1990 the highest median family income in the region was in the community of Womens Bay, with a figure of $51,537, while the lowest figure was $17,813 for Old Harbor.

Table 3.12-56 Household Income Information, Selected Kodiak Region Communities, 1990

Community	Total Units	Occupied Units	Vacant Units	Total Households	Average Household Size	Median Household Income	Total Family Households	Median Family Income
Kodiak	2,177	2,051	126	2,051	3	46,050	1,399	49,404
Kodiak Island Borough	4,885	4,083	802	4,083	3	44,815	2,982	47,600

Source: U.S. Bureau of the Census

Table 3.12-57 displays data on employment and poverty for the City of Kodiak and the Kodiak Island Borough for 1990. As shown, there was very little unemployment in these jurisdictions, presumably due in part to the presence of fishery related employment opportunities, and also the fact that the Kodiak economy is relatively diversified by rural Alaska standards, and particularly in comparison to the Aleutian region communities. The City of Kodiak has the lowest unemployment of any community in the region, whereas the villages of Larsen Bay and Old Harbor are at the opposite end of the continuum, with 40 and 39 percent unemployment, respectively. Proportions of the population considered to be below the poverty threshold vary between the communities, but as was the case in the Aleutian region, this is somewhat misleading. For example, Akhiok has the lowest poverty rate of any community in the region at 2.4 percent, but at the same

time 51 percent of the adults in the community are not working. Old Harbor has the highest poverty rate in the region at 31 percent.

Table 3.12-57 Employment and Poverty Information, Selected Kodiak Region Communities, 1990

Community	Total Persons Employed	Unemployed	Percent Unemployment	Percent Adults not Working	Not Seeking Employment	Percent Poverty
Kodiak	3,644	162	4.40%	23.00%	927	6.20%
Kodiak Island Borough	7,218	346	5.30%	23.90%	1,918	5.50%

Source: U.S. Bureau of the Census

Population Attributes of the Resident Groundfish Fishery Workforce

Table 3.12-58 provides information on group housing and ethnicity for Kodiak. Group housing in the community is largely associated with the processing workforce, but not to the nearly exclusive degree seen in the Aleutian communities, due to the greater complexity of the institutional base and range of housing types in Kodiak. As shown, only six percent of the population lived in group housing in 1990. This is a much lower percentage of population residing in group quarters than in the other communities profiled, and is consistent with a workforce more heavily drawn from the local labor pool. Further, while there is still as significant difference between the group quarter and non-group quarter demographics (with the group quarter population being a higher minority group than the community population as a whole), the differences are not as sharp in general or for particular groups as seen in the Aleutian region communities. The male to female imbalance is present in the community, as shown in Table 3.12-59, but it is of a lesser magnitude than seen in the Aleutian region groundfish communities. This is consistent with Kodiak's fishery related workforce being drawn more from the local community labor pool than is the case in the Aleutian communities.

Table 3.12-58 Ethnicity and Group Quarters Housing Information, Kodiak, 1990

	Total Population		Group Quarters Population		Non-Group Quarters Population	
Kodiak City	Number	Percent	Number	Percent	Number	Percent
White	4028	63.28	192	53.93	3836	63.84
Black	29	0.46	3	0.84	26	0.43
American Indian, Eskimo, Aleut	811	12.74	21	5.90	790	13.15
Asian or Pacific Islander	1282	20.14	118	33.15	1164	19.37
Other race	197	3.10	22	6.18	175	2.91
Total Population	6365	100.00	356	100.00	6009	100.00
Hispanic origin, any race	407	6.39	42	11.80	365	6.07
Total Minority Pop	2429	38.16	181	50.84	2248	37.41
Total Non-Minority Pop (White Non-Hispanic)	3936	61.84	175	49.16	3761	62.59

Source: Census 1990 STF2

Table 3.12-59 Population by Age and Sex, Kodiak City: 1990 and 2000

	1990		2000	
Kodiak City	**N**	**%**	**N**	**%**
Male	3,496	55%	3379	53%
Female	2,869	45%	2955	47%
Total	6,363	100%	6334	100%
Median Age	NA		33.5 years	

Source: U.S. Bureau of the Census

Industry Provided Data

Given the nature of the relationship between the processing workforce and the local communities, industry information comparable to that of the Aleutians region was not systematically collected from Kodiak region entities. The information received was not sufficient to be able to disclose precise community level information due to confidentiality concerns. As a generality however, the 2000 data received indicated that at least some shoreplants in this region have workforces with a greater minority population component than the Aleutian regional average (77.5 percent). This is despite the fact that, as a rule of thumb, the Kodiak processing workforce is drawn to a larger degree from a local labor pool than is the case for the Aleutian communities. As was the case for the Aleutian region, different firms provided different levels of detail in the breakout of the internal composition of the minority component of their workforce. For some plants the total minority figure was not disaggregated, and not enough plants within this region provided detailed data to allow region specific discussion. However, as mentioned in the Aleutian region discussion, all of the shoreplants in any region that provided detailed data have workforces 5 percent or less African American and 5 percent or less Alaska Native/Native American. For the Kodiak region, the group classified as Asian/Pacific Islander was the largest minority group noted within the limited detailed data received.

Regional Summary

The community in the region that is most engaged in and dependent upon the groundfish fishery (Kodiak) is comprised of more minority residents than non-minority residents. While systematic data do not exist, the data that are available suggest that the workforce at the processing plants that would likely feel the impacts of the alternatives are primarily comprised of minority workers.

Washington Inland Waters Region

General Community Population Attributes

The greater Seattle area is the center for much of economic activity related to the North Pacific groundfish fishery, but the geographic footprint of those activities is difficult to define, and it cannot be attributed to specific communities or neighborhoods in the same manner as Alaska communities may be linked to the fishery, as discussed in Appendix F(1). For comparative purposes, and that the information on the Seattle-based catcher-processor sector described below can be compared to the greater Seattle population base, the Table 3.12-60 provides ethnicity data for the Seattle-Tacoma Consolidated Metropolitan Statistical Area

(CMSA) as defined by the U.S. Bureau of the Census.[11] As shown, unlike the Alaska groundfish communities, the white portion of the population comprises a large majority of the overall population (i.e., minorities are actually a distinct mathematical minority, unlike the relevant Alaska communities).

Table 3.12-60 Ethnic Composition of Population, Seattle-Tacoma CMSA, 1990 and 2000

	1990		2000	
Race/Ethnicity	**N**	**%**	**N**	**%**
White	2,214,579	86.5%	2,819,296	79.3%
African American	121,702	4.8%	165,938	4.7%
Native Amer/Alaskan	32,980	1.3%	41,731	1.2%
Asian/Pacific Islands*	164,386	6.4%	300,533	8.5%
Other**	25,517	1.0%	227,263	6.4%
Total	2,559,164	100%	3,554,760	100%
Hispanic***	71,069	2.8%	184,297	5.2%
Total minority population	383,198	15.0%	816,858	23.0%
Total non-minority population	2,175,966	85.0%	2,737,902	77.0%

Source: U.S. Bureau of Census.

* In the 2000 census, this was split into Native Hawaiian and Other Pacific Islander (pop 19,837 (0.6%)) and Asian (pop 280,696 (7.9%))

** In the 2000 census, this category was Some Other Race (pop 79,353 (2.2%)) and Two or More Races (pop 147,910 (4.2%)).

*** 'Hispanic' is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

Information on household income and employment and poverty information for the Seattle-Tacoma CMSA comparable to that provided for the relevant Alaska groundfish communities is not presented here. These types of data at the CMSA level are not meaningful for this environmental justice analysis.

Population Attributes of the Resident Groundfish Fishery Workforce

Given the nature of engagement with the fishery, the Washington Inland Waters Region does not have the same type of resident workforce focused in individual communities in a manner comparable to that seen in Alaska communities, as discussed in detail in Appendix F(3). Rather, this environmental justice analysis will focus on industry provided sector data as described below.

Industry Provided Data

As noted in the introductory discussion, catcher vessel ownership and crews based in the area are assumed to reflect the overall population structure. Systematic demographic data were not collected for the groundfish catcher vessel crews in the Washington inland waters region, but interviews with local sector association

[11] A Consolidated Metropolitan Statistical Area (CMSA) consists of two or more contiguous MSAs The Seattle-Tacoma WA CMSA consists of Seattle WA PMSA (1) King and Snohomish Counties, and (2) Tacoma (Pierce County). A Metropolitan Statistical Area (MSA) can be defined as a city of over 50,000 inhabitants together with the county in which it is located and contiguous counties which are economically and socially integrated with the central city. It may also consist of an urbanized area of 50,000 with a total metropolitan area population of at least 100,000.

personnel suggest that minority population representation within this sector does not exceed the proportion of minority representation in the general population, therefore environmental justice is not an issue with respect to potential impacts to this sector.

Shore processing plants are not present in this region, and the mothership sector data cannot be presented due to confidentiality restrictions based on the small number of entities. As a working assumption, it is assumed that the mothership employment structure is similar to that of the catcher processor sector, although the catcher-processor sector may have a somewhat higher minority representation in the workforce due to more consistent targeted hiring in rural Alaska.

Information on catcher-processor workforce demographics for 2000 was obtained from seven entities that together account for almost all (99 percent) of the of the non-CDQ target pollock caught by trawl catcher processors in the BSAI as well as 86 percent of the CDQ pollock. (While these entities also catch a significant amount of Pacific cod, catch among catcher-processors in the Pacific cod fishery is more dispersed over a larger group of participating entities.) Different firms provided different levels of detail in the breakout of the internal composition of the minority component of their workforce, but the detailed information provided encompassed 1,906 out of the 2,126 persons reported, or 90 percent of the total reported workforce. Table 3.12-61 provides ethnicity information for those entities reporting detailed breakouts. As shown, the portion of the workforce within the detailed reporting set was 36.9 percent white or non-minority and 63.1 percent minority. Adding the more highly aggregated data does not significantly change the overall minority/non-minority ratio. Within the total set of responding entities, individual entity workforces ranged from a 36 percent minority workforce to an 85 percent minority workforce. Among entities reporting detailed data, Hispanic was the largest minority component in every entity's minority workforce segment, with one exception (in which case the largest minority segment was Asian/Pacific Islander, and Hispanic was second). Apart from the entity where Asian/Pacific Islander workers were the largest minority worker segment, Asian/Pacific Islanders were the second largest minority group represented for all but one of reporting entities (in which case the second largest group was Alaska Native/Native American).

Table 3.12-61 Ethnic Composition of Workforce for Catcher-Processor Entities Reporting Detailed Demographic Information, 2000

	2000	
Race/Ethnicity	**Number of Workers**	**Percentage of Workers**
White non-Hispanic	704	36.9%
Hispanic	585	30.7%
African American	121	6.3%
Alaska Native/Native American	164	8.6%
Asian/Pacific Islands	310	16.3%
Other	22	1.2%
Total	1,906	100.0%

Source: Individual catcher-processor entities contacted through the At-Sea Processors Association, 2001

Regional Summary

For reasons discussed earlier, environmental justice is not a regional or community level issue for North Pacific groundfish management initiatives for the Washington inland waters region or the greater Seattle area. Although quantitative data are not available to confirm this, based on interview data it does not appear to be an issue for the regionally based catcher vessel fleet either. As there are no Alaska groundfish shore based processing entities in this region, the types of environmental justice issues associated with these workforces seen in some of the Alaska regions are not present in this region. Industry provided data for the catcher-processor sector, however, show that environmental justice is a potential issue among that sector's workforce. While the population of the greater Seattle area was 23 percent minority in 2000, this workforce was 63 percent minority for that same year. Therefore, if substantial job losses in this sector were to occur under various management alternatives, they would disproportionately accrue to minority populations. As noted in Appendix F(1), while most of the hiring for catcher-processor entities is done out of the greater Seattle area, there are targeted hiring efforts directed at Alaska residents in general and Alaska Native residents in particular. In addition to CDQ related employment issues associated with this sector and discussed separately, loss of other Alaska Native held jobs in the catcher-processor sector is also a potential environmental justice issue, but not for the Washington inland waters region.

Other/Alaska Native Specific Environmental Justice Issues: CDQ Regions and Community Outreach

The CDQ region of Western Alaska is an area of environmental justice concern with respect to the potential fishery management alternatives covered by this EIS. The CDQ program was specifically designed to foster fishery participation among, and direct fishery benefits toward, minority populations (87 percent of total population in these villages is comprised of Alaska Native residents) and low-income populations in the economically underdeveloped communities in Western Alaska. To the extent that the CDQ program has achieved these objectives, negative impacts to the CDQ program and communities are essentially, by definition, environmental justice impacts. CDQ region existing conditions are discussed in detail in Appendix F(4), and additional information is also presented in Section 2.5.1.4 ("The CDQ Fishery") and in the RIR (Appendix C to this document) in Section 1.4.3.4. (CDQ specific impacts potentially resulting from the alternatives are summarized in Section 4.12.2).

In terms of specific outreach to include Alaska Native populations in this EIS process, in addition to contacts appropriate for government-to-government consultations, Alaska Native groups were contacted individually over and above the regular scoping process notifications. This was to ensure the opportunity for these entities to provide input and receive information consistent with the notification and disclosure intent of environmental justice concerns. Specific notification of Alaska Native communities and entities was conducted utilizing a contact list developed during the recent North Pacific groundfish programmatic SEIS effort. During that effort, NMFS obtained from the Bureau of Indian Affairs (BIA) a list of all governmental entities that are formally recognized by the federal government as tribal governments in Alaska. A subset of this state-wide list was created by employing (and extending) the CDQ eligibility criteria (summarized in Appendix F(4)), including using a 50 nautical mile buffer from the coast, but enlarging the area from just the Bering Sea/Aleutian Islands area to additionally encompass the entire Alaskan Gulf of Alaska coast. All of entities on the BIA list that fell within this 50 nautical mile wide swath inland from the coast were placed on the contact list for the groundfish programmatic SEIS, and this same contact list was, in turn, used for this Steller sea lion SEIS contact process. This list, containing some 125 Alaska Native entities, appears in Appendix B, along with a copy of the letter that was sent to all entities on the list.